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On turning under Clover, and its Decay.

The season is fast approaching when the practical farmer will begin to consider what is the proper time to turn in the second growth of clover, by way of preparing his ground for wheat. With the loose, gravelly, loamy soil of a large portion of Michigan, clover is found to be a very great means of enrich ing, or at least of developing the fertile qualities that otherwise would lie latent and inert in the soil.—Each year it is becoming evident that the cultivation of wheat and clover together are indispensable. We know there are soils where wheat has been grown year after year in succession, and without interruption, and it is calculated that this will last *forever*—but where one piece of this kind of land exists, there are twenty others which will bear no such amount of cropping. To these the skillful, practical farmer applies manure, or else plows in clover, or perhaps does both. The growth of clover which is turned under, is generally that which springs up after the first crop has been taken off for hay. It will not be uninstructive, therefore to take a glance at the composition of the plant and the yield per acre of the several organic and inorganic matters which is either taken off the field, or returned to it by the process of turning under.

An acre of the first cutting of clover is estimated to yield two tons of hay,—and these two tons of clover, according to the experiments of Way, are found to contain:

Water	586 lbs.
Organic matter	3,584 "
Ash	310 "
	4,480 "

The second cutting is considered as equal to half the first cutting; and the same analyst gives the contents at just the half of each of the above named substances, or at the rate of

Water	293 lbs.
Organic matter	1,792 "
Ash	155 "
	2,240 "

Boussingalt gives the ultimate elements of the first and second cuttings of the clover per acre, as follows:

Carbon, (1st cut)	1,838 lbs.		
" (2d cut)	919		
		2,757	
Hydrogen, (1st cut)	192		
" (2d cut)	96		
		288	
Oxygen, (1st cut)	1,474		
" (2d cut)	737		
		2,211	
Nitrogen (1st cut.)	79		
" (2d cut)	39		
		118	
			5,374 lbs.

Professor Johnston separates the clover into the following divisions of proximate elements or substances which enter into its composition :

Albumen, gluten & casseine (1st cut)	430 lbs.		
do (2d cut.)	215		
		645	
Fat, Oil, etc. (1st cut.)	143		
do (2d cut)	71		
		214	
Gum, dextrine, starch, sugar, &c., (1st cut)	1,825		
do. (2d cut)	927		
		2,782	
Fibre & husk, (1st cut)	1,156		
do (2d cut.)	578		
		1,734	
			5,375

Professor Way gives the following results as the composition of the ash, or the inorganic elements entering into the composition of the clover grown on an acre :

Sulphur, (1st cut.)	18 lbs.		
do (2d cut.)	9		
		27	
Sand & Silica, (1st cut.)	10		
do (2d cut.)	5		
		15	
Potash, (1st cut.)	51		
do (2d cut.)	25		
		76	
Soda, (1st cut.)	7		
do (2d cut.)	4		
		11	
Lime, (1st cut.)	110		
do (2d cut.)	55		
		165	
Magnesia, (1st cut.)	34		
do (2d cut.)	17		
		51	
Oxides of Iron, (1st cut.)	3		
do (2d cut.)	1		
		4	
Chlorides of sodium & potassium (1)	8		
do (2)	4		
		12	
Phosphoric acid, (1st cut.)	19		
do (2d cut.)	10		
		29	
Sulphuric acid, (1st cut.)	13		
do (2d cut.)	6		
		19	
Carbonic acid, (1st cut.)	52		
do (2d cut.)	26	78	
			487 lbs.

By the above figures it will be seen that in every crop of clover taken off the soil, which would contain two tons of long measure, there would be carried off in it 3,584 pounds of organic matters, and 310 pounds of inorganic. The plowing in of the second crop, containing a ton, would return just one-half these amounts ; but there would also be left in the field the whole of the stubble of the clover, together with the roots, which would count, at least, as equal to the value of the second crop plowed in, and in some cases much more. Counting it in this way, the plowing in of the second crop of clover actually makes up for all that has been taken from the soil, and the fertilizing action of clover may be thus accounted for. The disintegrating power of the roots, combined with the power of the leaves, which assimilate large quantities of organic matter from the atmosphere, as it is now generally admitted by those who have paid attention to the subject, thus combine to leave the field, after the second crop is plowed in, with more of the elements of fertility ready for the use, or in a condition to supply the wants of another crop, than before the clover was grown, although a crop of clover may have been taken off it, to be used for hay, or to be sold.

The soils of a large portion of Michigan are of such a nature that they readily decompose, when submitted to influences which favor or excite disintegration. The gravelly pebbles and small particles of stone, which make up the soil, contain earths that readily separate and enter into new combinations, when submitted to the influences of the atmosphere, as well as when brought in contact with the fermentation, and chemical change which the plowing in of a crop of green clover is sure to originate.

There are several considerations connected with the plowing in of a green crop, which might as well be noticed now. In the first place, our climate favors it, being very warm and not too dry, and fermentation is readily produced. All fermentation proceeds from the combined action of air, heat and moisture. Bear this in mind, for in plowing in clover, to reap its full benefit, the land ought to be in a condition by which the whole three may be brought to bear with the most economical effect. If the land is plowed in such a manner as to exclude the air, fermentation will be only partially carried on. If the plowing is done at such a season, or at such a depth as to prevent the action induced by heat, fermentation will also be hindered. Again, if the plowing is done in such a mode that the green crop is exposed to the air and heat of the sun quickly, its moisture is dissipated, it dries, and a tendency to ferment is checked. To plow in a crop of clover, therefore, that the land and the succeeding crop may have the full benefit of it, requires that it should be plowed so as to cover the clover thoroughly, leaving the ground that the air will circulate through it, and at the same time in such a shape that the crop plowed in will not be pressed so heavily upon as to prevent the development of the heat necessary to bring on decomposition. Another important consideration should be that the soil lying above the decomposing substances plowed in, should be reduced to a fine tilth, to enable it to ab-

sorb the fertilizing matters which the process of fermentation evolves from the clover plowed in. It is well understood, that if a piece of a granite rock remains in its solid state, nothing will grow upon it.—Reduce it to coarse gravel, and there are some plants that will find nourishment, and cling to it, but reduce that rock to fine powder, such as the soil is composed of, and almost any crop can be grown upon it. In the first state, the granite is not in a condition to retain moisture or to absorb any of the fertilizing gases which would act upon it, and fit its particles to nourish plants. Seed falls upon it, but finds no covering for the rootlets it would send forth, and all moisture is dissipated from the surface, none is retained. In the second state, there is a slight alteration for the better, and lichens and mosses find enough of a foothold to sustain themselves, while their roots fasten upon and decompose it. In the third state, the whole particles of the granite are reduced to such a state that every atom is in a condition, not only to retain the moisture necessary to induce a change, but also is itself constantly furnishing the elements which the roots of plants seek to promote their growth. This example shows how necessary it is to work a soil by mechanical means to a fine tilth; and also explains in some degree the necessity there is for the heavy drag and harrow as well as the roller, upon clay soils, where the surface is apt to be baked into great lumps or clods, each of which, to all intents and purposes of cultivation, is a piece of granite.

Having stated that air and moisture are necessary to generate heat, and that the whole three are brought into action to reduce the crop of clover plowed into the soil, fit for the nourishment of plants, it follows that a few words should be said about the mode of plowing it. Where the Michigan plow with a jointer is not used, the furrow should be turned in all cases, so as to lie as near an angle of 45° as possible, with the edge resting on the one before it. We hear a great deal about the plow being put in beam deep; and plowing to the depth of 10 to 12 inches. We sincerely believe that for every furrow that is plowed to the depth of 10 inches in this state, there are an hundred that are not plowed over 7 inches in depth; and the reason we judge so is, that most of the plows we have seen in use during our travels, have been implements that could not be made to run deeper than 7 or 8 inches without such intense exertion on the part of the plowman as would exhaust both man and team before the one-fourth of a day's work was done.—There are some that have the implements; but consider that a furrow slice, to be right, or at a proper angle, if 10 inches in depth ought to be at least 14 inches wide, and it will be admitted that even in light soils such a furrow will require a very well built plow to run at that depth without some considerable exertion on the part of the man between the handles to keep it there. While we shall be glad to hear of deeper work, we are forced to believe that if a field is plowed at an average depth of 8 inches, with a breadth of slice of 11 inches, it is full as much and more than most of our farmers do in their ordinary plowing. Such a furrow slice, however, would leave the crown which would be turned up sixteen inches above the hard surface over which the sole of the plow had run, and there would be a triangular shaped hollow channel underneath each slice, filled with the green clover, with a base of eleven inches, and a height of eight, which would afford ample space for the air and moisture to aid in promoting fermentation. The soil above, if first harrowed length-wise the furrow, and then cross-wise, would leave a tilth of nearly four inches depth over the whole, which would serve to retain all the fertilizing gases evolved by the decomposition of the buried plants. In this way, and by this mode of plowing, it will be seen, therefore, that all the conditions are maintained necessary to get the whole benefit to be derived from the plowing in of a green crop.

Now it may be well before closing, to draw some attention to the fermentation and decomposition of a green crop. Fermentation, or rather decay cannot take place where there is no moisture; it is a sensible intestine motion excited among the particles of a fluid, or moist substance, by which all of them are removed from their present combinations, and by which the same particles form new combinations, with very different qualities from those in which they were before decay begun. Green clover containing 75 per cent. of water, and 23 per cent of organic or combustible matter, of which 11 parts are carbon, it will be seen that the moment decay begins, heat will be evolved, carbon will be freed, and carbonic acid will be formed by the absorption of oxygen from the air, and seek to escape in the form of gas, the other elements will each form a union with others, some escaping altogether, till the whole process of combustion or decay is at an end, and nothing is left but the ashes.

The first change which takes place is the vinous or saccharine fermentation, for which the clover is ready, as it contains 3½ out of 23 parts, of substances which would promote this first process. Next to the vinous stage follows the acetous change, and the putrid state comes last, after which, the moisture and the gases being all carried away, a residue is left, which is a brown mass of earthy substance, containing the primitive earths, metals, oils and salts, which entered into the composition of the living plant, and which had been previously taken from the soil. During the progress of this change, ammonia, phosphorated hydrogen gas, carbonic acid gas, and hydrogen gas, impregnated with vegetable matter, is constantly evolved. If the change should take place on the surface, the escape of these gases would be easily perceived by their offensive smells; but buried under a depth

of four or five inches of soil, reduced by mechanical means into a fine tilth, they are all absorbed, and go to make new combinations, which remain unchanged until needed by the new race of plants of the succeeding crop. It will be seen by this, therefore, that while we are smoothing the soil, and forming it into shape, by frequent cultivatings and harrowings and rollings, for the reception of the seed, we are also making it more susceptible of retaining the fertilizing properties of the manures, which have taken so much time and expense to put into the soil.

We have said that we believed that as a general rule, the plowing in of clover was not as well performed as it ought to be; we may also add that the surface of too many grass fields proves that the harrowing is frequently as poorly performed as the plowing. Let our readers reflect that in laying down a piece of land to grass or for pasture, how satisfactory it will be during the whole time it may be used for hay, to have it so that a mowing machine may sweep from one end of the field to the other, without interruption, and what evidence it will always give that its possessor understands his business, and knows how to farm to a profit.

Farm Management.

Almost every one has the idea that the management of a farm, or of a large piece of land, is easy work, and requires but little forethought, though it is generally admitted that the man who undertakes the direction of a farm, is the better for a little practice. Another prevailing notion is, that men capable of managing a farm profitably, may be picked up as easily and as plentifully as blackberries in harvest time.—There never were two greater mistakes, and we have a very good illustration of them published in the *London Agricultural Gazette*, by the editor of that paper, who finds it difficult to procure one, even in England, where men capable of taking the charge of a large piece of land to improve in a peculiar manner, might be supposed to be plenty, and easily got at any time. The applications, it will be seen, were numerous, but when the qualifications wanted were enumerated, the man who possessed them was not so readily found out. The editor says:

"We have lately tried to obtain the services of an experienced and intelligent man for the management of a large farm in one of the central counties of England: and have been struck by the abundant confidence of the several candidates for the office, and their apparently easy estimate of the qualifications needed. The farm contains probably a thousand acres, of which about 800 are still an unenclosed dry heathy moor. The climate of the district is sufficiently moist; and its light sandy soil, under good management, will grow turnips and barley readily enough.—At present, however, the greater portion of it is in a state of nature, and the crop it bears is ling.

"Now, just think of the many important questions on which the advice of the farm-manager is needed. He has first to frame a scheme of cultivation; and, supposing the whole farm brought under it, he has, after calculating the kind and quantity of stock which it will maintain, to determine the kind and quantity of accommodation required for it. Farm buildings have to be erected. It is a matter of much difficulty to decide upon their position in the case of a long narrow farm of such extent. The mansion or farm-house and some few buildings are already built at one end of this long strip, and unfortunately at the narrow end of it, for it widens out considerably at the other. And whether or in what degree the new buildings are to be a mere addition to the old—or if they shall be erected in one or in two positions on the wider end of the estate; and, if so, how the several portions of a complete farmery are to be distributed amongst them—whether each shall be complete in itself, containing stack-yard and root-store, granary, and straw-house, yards, stables, stalls, and boxes (a portable threshing machine being employed to travel from one to the other, as litter is wanted at each); or if each shall contain a portion only of a complete set of buildings—the breeding stock for instance, and the fixed threshing machinery, the granary and the rick-yards, and a portion of the stabling being placed around or near the tenant's house; while accommodation for the young and fattening stock, and for sheep, and for some of the horses of the farm, is provided at the other stations nearer where the manure is wanted, and the labor too: all these questions will be decided mainly upon the advice of an intelligent farm-manager.

"The decision here does not merely concern the investment of a sum of £2,000, ($10,000), it influences the annual expenses and returns of the farm for ever after—placing the tenant in a groove, as it were, from which no escape will afterwards be possible; and this, in the case of so large a business, is a matter of very great importance.

"Then, supposing a decision to be arrived at, and the quantity and kind of the accommodation needed, with its position on the farm to be fixed, there still remains to be designed the arrangement of each set of buildings within itself, so as to ensure economy of labor—the planning of each separate farmery for the purpose it has to serve. Here, too, the advice of the manager is required, and would be followed.

"This is not all: the heath has to be reclaimed piecemeal: two hundred acres have to be educated per annum—brought out of the wilderness and made productive. How is this to be done without abrupt interference with the existing plan of operations? or, rather, what is to be the plan of operations which shall not be annually upset by the sudden influx of so much more to be arranged each year, but which shall, instead, naturally stretch year by year at the

rate proposed, without any breakage or confusion.—The difficulty is so to crop the fresh instalment every year that it shall yield an increased maintenance uniformly throughout the period. It is easy to decide off-hand that one-half of every annual slice cut off the waste shall grow corn and the other half green crop; it is not so easy to arrange the cropping of the green-crop half, so as to ensure a monthly increase of provision for the larger flock of sheep and herd of cattle, which will thus year by year have to be kept until the whole work is completed. And yet this has to be done, and it is the work of the bailiff to do it.

"Apart, too, from the scheme of cultivation, think of the responsibility connected with the selection and purchase of stock. Annually so many more horses must be purchased. The sheep stock and the cattle have yet to be selected, and annual purchases must be made until the capabilities of the place are fully developed. Here, too, it is not the mere expenditure of so much of an employer's money; it is his committal to a system and a policy, good or bad, for future years, that *is* the really important aspect of the matter.

"Consider, too, the experience needed in the selection and purchase of tools and machinery—whose threshing machine, whose steam-engine, shall be purchased—whose plough, harrow, grubber—what roller, presser, clod-crusher, may be needed—and what power to work these implements, and with them cultivate 1000 acres of such light sandy soil—all these are questions awaiting the decision of the bailiff.

"Lastly, and chief of all, there are the resolution, temper, and energy required to manage and direct the manual labor needed—the prejudices of the district against innovation to be overcome—and the goodwill and hearty co-operation of the working men to be secured.

"Here is surely scope enough for the exercise of a very high order of ability and a very great amount of intelligence. Those who have charge of the agricultural education of our future land agents and farmers would do well to consider whether the intelligence and ability which they are trying to confer will fit their pupils for a field like this. It is when the practical business of farming is commenced that the real relative importance of the different branches of an agricultural education becomes apparent, and that experience in the field and in the market is seen to be essential. That there is no lack of confidence among the young men offering for situations of the kind is plain from our experience of the last few days; what sort of a foundation it is built upon is an altogether different thing."

☞ The Chinese Wistaria, if trained to a pole eight or ten feet high, and kept well cut back for some years, will, in process of time, have all the beauty and appearance of a weeping tree, and what is even more valuable, bloom in succession all summer.

How to Choose a Good Milch Cow.

BY J. H. MAGUE.—TRANSLATED FROM THE FRENCH BY MR. HUXTON, FOR THE LONDON VETERINARIAN.

BREED AND DESCENT.

1. *Breed.*—We find good milkers in all breeds, but they are rare in some and very common in others. It could not be otherwise. Milking properties, depending on the conditions which determine the formation of the breeds, are due partly to the climate, the soil, the air, and the plants of the countries where the breeds have originated; and must, therefore, vary in our different breeds of horned cattle with the hygienic conditions peculiar to each locality.

Milkers, and more especially animals intended for breeding, must always be selected amongst breeds celebrated for abundance of milk. Not that we can hope to import into our departments, with a dry and warm climate, all the qualities of the excellent milking breeds possessed by countries in which the soil is fertile, the air moist, and the sky cloudy; but, as the influence of climate, though very marked, takes effect only in the long run, the properties of the animals imported are maintained—though subject, doubtless, to gradual deterioration—during a period which varies with the precautions taken to preserve them; and for several generations the descendants of the individuals of a good imported breed give more milk than individuals belonging to a breed formed on the spot, when hygienic circumstances are not favorable to milking properties.

It is not to be forgotten, moreover, that under the influence of particular circumstances, which it is sometimes impossible to call into existence, animals manifest properties which we cannot produce directly. This explains why it is often more advantageous to import qualities possessed by foreign stock, than to try to develop them in native stock.

Here we deem it sufficient to observe, that good milking breeds are distinguished by a soft and supple skin, and by tissues rather relaxed than rigid; are not hardy or fit to bear fatigue, (sweating easily, and falling rapidly off when put to work) are difficult to keep, seldom fat, and have often little flesh on the buttocks.

2. *Descent.*—As milking qualities are, in a great measure, dependent on structure and temperament, which are more or less hereditary, this exercises a great influence.

In each breed, therefore, we should choose individuals belonging to the best stocks, and the offspring of parents remarkable for their milking qualities; for it is certain that good milk cows produce others which resemble them.

It should be our object, then, as far as possible, to obtain cows engendered by youngish bulls, whatever be the race to which they belong.

But it is, especially, when selecting stock for the purpose of breeding milk cows, that particular care

should be taken to select individuals belonging to good families. A cow of a good milking family, or even breed, may occasionally be an excellent milker, and more than this is not wanted when it is not meant to breed from her. The same cannot be said when breeding is intended, because there would be little chance of her transmitting the accidental or exceptional qualities possessed by her; whereas the qualities forming the fixed and constant characters of the stock would, almost to a certainty, be transmitted to descendants.

These remarks with regard to breed and parentage, apply to the selection of the bull, which, as experience demonstrates, acts, like the cow, in transmitting the milking qualities which distinguish the breed and stock.

DIGESTIVE AND RESPIRATORY ORGANS.

1. *Digestive Organs.*—These organs have a powerful influence on the exercise of all the functions, and particularly on the secretion of the milky glands. Where the digestive organs are defective, good milk cows are rarely met with.

A good state of the digestive organs is evinced by the following particulars:

A belly of moderate size, with yielding sides, free from tightness: in aged beasts, the belly is often large, though the organs which it contains are in good condition;

A large mouth, thick and strong lips;

A good appetite, easy and quick digestion;

Glossy hair, supple skin, with a kind of unctuous feel.

Animals possessing these anatomical and physiological properties, eat well, drink much, and if they are properly fed, and not over-worked, make much blood and yield large quantities of milk.

2. *Respiratory Organs.*—The respiratory organs complete the system of nutrition. The object of the lungs is to bring the substance furnished by the food into contact with the air, and make it capable of nourishing; they digest air as the stomach digests food. Hence a good form and a healthy condition of the chest are necessary to the production of much milk.

Their ability to fulfil their functions is evinced—when they are large, and lodged in a spacious cavity; in other words, when the chest is wide, deep, and prominent—when the ribs are long, and strongly arched throughout their whole length, and more especially at the upper extremity—when the withers are thick, and the brisket rounded behind the shoulder and elbow—when the spine is long, straight, horizontal, not saddle-backed, and the loins are wide—when the nostrils are large, dilated and well opened—when the air is inhaled without any appearance of hurry, and exhaled from the chest in great puffs.

The movements of the flanks are free, easy, and extensive, in beasts which breathe well.

These properties of the digestive and respiratory organs indicate that digestion and respiration, being well performed, furnish an abundant and rich blood: all the organs being in a state of activity favorable for the exercise of their functions. Animals combining these properties in full vigor, are capable either of performing much work, or fattening rapidly, or giving much milk, according to the predominance either of the powers of motion, viz., the bones or muscles: or of the nutritive system, viz., the cellular and adipose tissues: or of the organs for providing milk, viz., the glands giving milky secretions, and the milk vessels.

SHAPE, CONSTITUTION, FEATURES, TEMPERAMENT, COLOR.

1. *Shape.*—Active mammary glands are seldom found united with the graceful, rounded forms which constitute what is vulgarly called *beauty* in quadrupeds. Most frequently good milkers have sharp points, and appear more or less loose and flabby. In regard to bony structure, they may be as well formed as cows for their readiness to fatten, or ability to work; but being seldom in plump condition, they seem lean and raw-boned.

Hence, when a herd of cows have all been fed and kept in the same way, it would not be proper to fix upon the most beautiful as the best milkers. In so doing, we should be almost invariably mistaken. In the hind quarters, there is often something defective in regard to form; they are largely developed, but the flesh is not in proportion to the bone, and the bony protuberances are very visible: the haunches stick out, and the pelvis is wide; the legs, standing far apart, leave a considerable space as a receptacle for large milk vessels.

The blood flows in great abundance to the milky glands, and keeps them in activity at the expense of the other organs; the muscles are slender, and the buttocks and thighs small and narrow.

The cows we recommend as milkers are those whose chine, instead of being all of one piece, shows, towards its centre, a space occupied by a kind of shrivelling, the effect of the distance between the spinous processes of the vertebræ; the process of the last dorsal vertebræ is strongly bent forward.

In some cows we have observed that this distinguishing mark is owing to the processes of the last dorsal vertebræ being shorter than those of the preceding vertebræ. In that case, the back has, at its middle, instead of a wrinkled or shrivelled part, a depression which is continued to the rump.

When this mark exists, the chine is often double in its posterior half; the ridge of the vertebræ is large and wide, and seems forked, and a slight depression prevails along the medial line of the body, and is more especially visible near the rump.

This mark is much looked for in Flanders, where great importance is attached to it; and among the dairymen of Paris, as well as the south of France,

where a common saying is, that a cow will be productive of milk, "especially when, towards the middle of the spine of the back, the processes stand apart so as to leave a space of two fingers' width."—(A. Rodat.)

If the chine is double, the vertebræ are thicker, the haunches more apart, and the loins and rump of greater width; in this case, the hind quarters are more largely developed, the pelvis more ample, and, consequently, the organs lodged in the cavity, and even the milk vessels, of larger dimensions.

The dairymen of Paris call these interruptions of the vetebral column *fontaines de dessus*, (upper springs,) in contradistinction to the *fontaines de dessous*,(under springs,) or those openings where the veins of the stomach sink into the flesh. They say that, in good cows, these upper and lower *fontaines* correspond with each other, and are equally large.

We may observe, that they never correspond, since those above are upon the medial line of the body, and the others on the lateral parts of the belly; and the name of springs (of milk) is not proper even for the lower ones, although they are traversed by veins.—The name thus given to the space left between the vertebræ, proves that it is a false analogy which has caused it to be considered as a sign of a good milker.

2. *Constitution.*—It is desirable that the special marks which indicate a great activity of the milky glands, and, consequently, a good milker, should be united with those which simply imply a good constitution.

These are large lungs, a broad and prominent chest, a somewhat low respiration, an abdomen of moderate dimensions, a good appetite, and a great inclination to drink—an inclination stimulated by the abundant secretion of milk.

Such cows eat much, digest easily and breathe well; they make *good* blood. This fluid gives activity to the nervous system, makes all the organs lively, and furnishes the glands with the materials of a copious secretion.

Cows possessing these properties last long, give much milk, and, when they become dry, soon fatten.

But it often happens that activity and vigor in the milky glands are united with close ribs, narrow, feeble lungs, delicate digestive organs, a moderate appetite, and frequently an ardent thirst. In that case, the cows have had a bad constitution, they can give much milk, but it is watery, and of bad quality, and they often die of disease of the lungs.

These cows seldom have many calves, though they show a great inclination for the bull; and they are difficult to fatten even when they are in good health and not giving milk.

3. *General appearance (Physionomic.)*—In all breeds, the preference should be given to cows which in form are the fartherest removed from that of bulls; to cows with small bones, fine and slender limbs, and a tail which is fine at its base; a small but longish head, narrowing towards the horns; the horns themselves of a bright color, tapering finely, and glistening; a supple and soft unctuous skin, covered, even to the forehead, with erect, glossy, soft hair, and provided, near the natural passages, with a short, fine, and silky down; a small neck, and shoulders *(encolure)* apparently long, because slender, especially near the head; small eyelids, well divided, but not much wrinkled; prominent eyes, and a gentle feminine look.

4. *Temperament.*—With these marks of a feminine description, cows should unite a sanguine-lymphatic temperament, and especially a mild disposition. Good milkers allow themselves to be easily milked; often, while ruminating, they look with a pleased eye, easily recognized, at the person who milks them; they like to be caressed, and caress in return.

5. *Color.*—We do not mention color as a sign of milking qualities, for we find good milkers among black Dutch cows, and red Flemish cows, as well as among white cows, and the wheat-colored cows of Breese. Color may be of great value, but it is chiefly as indicating the origin of the animal. The Flemings and Normans are very careful in preserving the colors of their horned cattle, but it is only because a red color, serving to characterize animals of the Flemish, and a brindle color those of Norman breed, facilitate their sale.

A few Queries from Owasso.

Editor of Michigan Farmer:—Fortunately, or unfortunately, (I hardly know which) I find myself the possessor of a timbered farm, and I should be glad to have some of your correspondents give me some of their experience on the best method of clearing and working it. You know we have in this state, both timbered farms, and opening, and prairie farms.—Your correspondents, I think, could give some valuable hints on the most economical methods of getting a piece of land, heavily timbered with beech, elm, maple, &c., into shape for cultivation.

I want also to know, whether on such a piece of land, well cleared and burnt off, I cannot drag in onion seed, in a similar manner to turnip seed; and whether it would answer to sow the onion seed in the fall, and if so, at what time? and the course to be pursued with the onions during the winter? whether they would have to be covered up, and with what, to serve as a protection from the frost?

There is another subject I want to know about; I have seen it mentioned somewhere that hedges were made on low grounds of willows: could not cattle and hogs crowd through such a hedge—willows being so flexible, and there being no spines to protect them? Yours, Shiawassee Farmer

Owasso, July 10, 1854.

[We sincerely hope some of our numerous correspondents will furnish this very young Shiawassee

farmer with their experience in managing and clearing their heavy timbered farms. Meanwhile we will answer some of his questions, and furnish him with a few hints, as to what it is best to do.

First—in relation to the management of his farm, as he has not furnished us with the size of his farm, or whether it is all fit for cultivation, or whether it contains any swamp or low lands, part of our advice will have to be founded on mere guess work. We will suppose his farm to contain 160 acres. It ought to be his first duty to divide it permanently, with some idea as to its convenience for future cultivation, with reference to where he intends his farm buildings to be located, and the position of his low lands, which he might want to make into permanent meadows.—If his farm contains 160 acres, his most economical plan would be to lay it out into lots of 20 acres each, keeping all the swamp land together as much as possible, in separate lots from the arable land. In clearing off the timber, commence with one of these lots, and get the timber thoroughly cutoff, the logs all dragged out, or burned up, the brush and branches gathered together, and all underbrush trimmed off, and when the whole is well burned over, which may be done in the latter part of August or beginning of September, drag it well over, and sow it with the best and cleanest wheat that can be had, at the rate of a bushel and a half per acre, sparing no pains to have the whole fallow dragged with as much care, and made as smooth as possible. In the spring, having got the rails ready, fence this lot round with good, permanent rail fence, one that will stand till the farm is in a condition to put on a better one. In the spring, before the snow has got off the wheat, sow it with large clover seed, at the rate of ten pounds to every acre. Some will say that six to eight pounds will answer. We say ten pounds,—this will give the stumps every chance to rot off quick, and if when the first crop of clover is off, and you have the means to procure or construct a stump extractor, get it at work the fall after the clover is either cut or fed off, and so proceed with each lot of 20 acres, finishing and fencing each one as fast as it is cleared; but bearing in mind at all times, the plan of the lots as you have laid them out.

A good plan of managing such fields economically, is to take off the first crop of clover for hay, and let the second crop stand till the seed is well ripened, and then turn it in for another crop of wheat. Mr. Pearl, of Marshall, informed us, a short time ago, that he had cleared a piece of ground, and had taken off first two crops of wheat, then corn, then wheat, and finally a crop of oats, before seeding down. This soil was strong enough to stand it, but such a soil is not to be had in all localities.

In clearing each lot, it ought always to be the practice to leave a clump or two of trees standing, in some corner, or in such a part of the field as would be found most difficult to cultivate to advantage. For in pursuing a course of rotation, there are few fields that would not have to be used as a pasture at some time or other; and a pasture for either sheep or cattle in this hot climate, without some shade for the animals, does not show good foresight. If the farm contains but 80 acres, the same course may be pursued, each division being made to contain but ten acres. If it should be inconvenient to set a stump extractor at work the second year, and the sprouts from the roots should become troublesome, one of the cheapest and least laborious methods of killing them off, is to turn the sheep into the lot, and sprinkle a little salt on the leaves and branches,—we will guarantee that there will not be much life left in the sprouts after the sheep have got through with them. If there is help enough on hand, two or three of the lots, may be all pushed forward at once, but always having an eye to preserving the plan, as originally laid out, which will aid in helping to decide where trees may be left at corners of fences, or to serve for future gate posts, or for shade, as may be deemed best for the convenience of future operations. There is much more that we might add relative to the commencement of the work of clearing a farm, and laying out the work correctly, and carrying it on systematically, year after year; but we will reserve it for a future number. Meanwhile, we should like to have the experience of some of our correspondents on the subject.

As an instance of the benefit of a little foresight at the commencement of farming operations on a new piece of land, we are acquainted with a friend of the *Farmer*, who came to this state twenty years ago, from Connecticut, having originally come from Paisley, in Scotland, to the "land of steady habits," as a weaver in one of its manufactories. He and one or two others however, located each eighty acres in Livingston county, and settled on it. None of them knew a great deal about farming when they begun; but our friend in coming from Connecticut, gathered a little package of the seeds of the pine, spruce and hemlock, which he brought with him, and planted out on the prairie where he located himself. His foresight has well repaid him. He has now the only grove of evergreens there is in the neighborhood.

As to the questions about onions, and raising them on new land, we have not the least doubt but they would grow very well, as everything does on new ground. But we have no idea that the seed could be sown in the fall, and a crop reaped from it. The frosts would completely kill the young plants. If our correspondent is desirous of raising a crop of onions on a large scale, it would be his best plan to get his ground in the most complete order in the fall, and then, after redragging it deeply and thoroughly in the spring, brush it over smooth with a brush drag, both before and after sowing the seed. If the ground was well burned, there might be a pretty fair crop, but we

doubt very much whether it would pay as well as wheat at $1,00 per bushel. Where we have seen onions grown for a profit on a large scale, the crop has required that the land should be uncommonly rich with manure, that it should be kept entirely free from weeds, that it should be deeply tilled, the roots going down very far into the soil, and that the hoeing should be of the most thorough kind. In fact, a great deal of manual labor was expended on the crop. For this reason we cannot think that the crop would be an advisable one to experiment with on a large scale.—Should a small piece be sown in the fall, to try the experiment, there is nothing better than hemlock or pine brush for a protection from the frost.

We have also seen hedges of osier willows spoken of; but not as fences. They have been used as screens, and have been set out in marshy places, because they could be readily cut, and sold to the basket-makers. The only protection they have been found to afford, consists in sheltering young plants or trees from the wind. They make a good hedge to prevent the bank of a brook from being worn away by the stream; but they would not keep out or turn any animal.—Ed.]

How to administer Medicine to Horses—Caraway for Colic.

We have had time to take up the book recently issued by Jewett & Co., entitled the *Modern Horse Doctor*, by Dr. Dadd, and to examine its contents carefully from time to time on several subjects to which our attention has been occasionally called, and we have on each occasion, laid down the book more and more pleased with the plain practical character of its recommendations, and the simple, easily understood language in which its instructions are conveyed. We take a couple of extracts from it to show the style of the work, and also because the hints contained in them may prove of service to those who are raising and taking care of valuable animals. The first one refers to the doctor's own practice in administering medicine, which is as follows:

The author almost invariably administers medicine in the form of drench, using a common champagne bottle. Some persons, however, assert that "there is great danger in drenching horses from a bottle; also, that it is very difficult to make them swallow fluid." We never knew of any accident following the use of the bottle, where ordinary caution was observed. There is a space between the canine teeth and grinders where the bottle can be introduced, and if kept in that position while "drenching the horse," it cannot do any harm. Our usual plan is, to stand on the right side of the horse, our back turned towards his body; we then take a firm hold of the lower jaw with the left hand, at the same time moderately elevating the head, (not too high,) while with the right we gradually pour down the contents of the bottle.—Time should be taken in the process, and if it is poured down in small quantities at a time, so much the better; the horse will be more likely to swallow it, especially if it shall be made palatable by the addition of a few caraway seeds or a little honey. Horses, like children, must be handled in the most gentle manner. They will generally refuse to drink even a little gruel, when any unnecessary severity is resorted to in its administration. They may be coaxed, but not forced.

In answer to the second objection, we observe, that there is no more difficulty (not half so much,) in administering a drench to a horse, under ordinary circumstances, than there is in giving a ball. To the latter we have great objections. First, in reference to its bulk; secondly, the length of time it takes for the gastric fluid to dissolve it; and lastly, its action is uncertain. Whereas medicine given in the fluid form is readily taken up by the lacteals, and operates, for good or evil, in much less time. It has also been urged that, when a horse is suffering from disease of the respiratory organs, the additional excitement following the act of drenching is unfavorable to the cure. Unfortunately, we are in a worse predicament when a ball is given, for then the tongue is forcibly drawn out of the mouth, while the hand is passed up to its roots, where the ball is deposited. Our own experience in the matter leads us to decide in favor of the bottle. If any further proofs of its utility are wanting, we may mention the fact that one half of our city horsemen are in the habit of administering drink from the bottle without accident.

The other recommendation refers to the use of a simple medicine, but evidently one which will perform all that is required, and which if taken cannot do the animal a great deal of harm. We refer to the use of caraway seeds to cure the colic. The Doctor says:

The most valuable remedy, and one which we invariably resort to for the correction of flatulency, or for the expulsion of wind from the stomach and bowels, is the above. As a carminative, caraways stand unrivalled; they also possess antispasmodic properties, to which, in the treatment of spasmodic colic, their efficiency has justly been ascribed. If they were brought into general use, to the exclusion of turpentine, gin and molasses, saleratus, &c. &c., so extensively used in this city, we should not hear of so many cases terminating fatally. Scarcely a week passes but we hear of valuable horses dying from diseases supervening on maltreated colic. In a recent case of spasmodic colic that came under our observation, the subject, a stud, valued at $175, was drenched with half a pint of vinegar and two ounces of saleratus! The death of so valuable an animal has probably taught its owner a lesson not to be forgotten. If a man should be suddenly attacked with colic, would he be so insane as to swill down medicines which his own common sense would seem to teach are opposed to the cure? Would he not rather try a little peppermint water, ginger tea or caraway? And if so, why not give the same to his horse, when similarly afflicted? The diseases of the latter require the same *sanative* treatment for their cure.

There is not a more effectual or innocent agent in the whole *materia medica*, for the treatment of colic, than caraways. And this our opinion is confirmed by that of various eminent veterinary practitioners.—The only objection to their use is, that they are *innocent—simple*. "The horse wants something *powerful*," he often gets it, too; the remedy lessens not the disease, for that is only aggravated—augmented; the vital flame, the living principle, goes out, and the animal dies a victim to our misguided notions.

Caraways should be powdered and given in warm

water, in doses of half a table-spoonful, and repeated as occasion may require. Horses which, in consequence of deranged digestive organs, are the frequent subjects of colic, may be benefitted by a weekly dose of the article in their food.

Deep Plowing—Clover Seed and Corn.

Mathew Millspaugh, residing in Van Buren, Wayne county, near Rawsonville, related to us some experiments of his as follows. He purchased a farm about three years ago, which was supposed to be run down and worn out. Some of his friends advised him not to purchase, urging as a reason that he could not raise anything. He however bought the farm, about one hundred and twenty acres, for sixteen hundred dollars. He took a second size breaking up plow, put on a double team, and ploughed one lot of twelve acres *twelve* inches deep; sowed to oats, seeded at the same time with three and a half bushels of clover seed; soon after sowed on the same sixty pounds of plaster to the acre. His crop of oats was good.—The next year, 1853, he cut on that piece two tons of hay per acre, and in the fall he gathered clover seed worth one hundred and sixty-four dollars. Aggregate value of the twelve acre field for 1853—

24 tons hay at say $6 ₱ ton	$144 00
Clover seed	164 00
Total	$308 00

From this amount the value of the labor has to be taken.

This is a fair dollar and cent operation, showing decidedly the advantage of deep plowing and plastering. The last winter the clover winter-killed. He ploughed it again this spring; planted to corn with thirteen acres more, making twenty-five acres, which now look full equal to the corn on other farms in the neighborhood, all of which look well. Mr. Millspaugh has also twenty-seven acres of wheat on the ground, about half of which is very good; the other half some injured. The whole twenty-seven acres now promise full three-fourths or seven-eighths of a good yield.

The soil of the farm is sandy, and considered poor. When he began deep tillage it was experimental with him, and bids fair to result very favorably.

We noticed in one of the fields of wheat a strip of about a rod wide, looking poorly compared with the other portions. This he said was left without plastering. The difference in the wheat is plainly visible across the entire field, as viewed from the road.

Mr. Millspaugh's operations have raised the reputation of the farm so much that he lately refused thirty-five hundred dollars for it.

Mr. A. Fletcher, residing in the town of Ypsilanti, about one and a half miles south of Rawsonville, stated to us that the farm he is now on he purchased two or three years since. He, like Mr. Millspaugh, was told that he could not raise anything. He heeded not the prophets, but took a breaking up plow, put on a double team, and *a boy on the beam*; ploughed ten inches deep, which was five inches deeper than appeared ever to have been ploughed. The result with him of deep ploughing is that his crops are all good, and growing better every year. The soil of his farm is a gravelly loam, and Mr. F. told us he could plainly discover the exact depth of the previous ploughings, for there was a crust, or as he termed it a *hard-pan* formed. The subsoil is gravel and loam.—This fact corroborates the opinion of Mr. Judd, near Franklin, that by constant ploughing of a uniform depth a crust is formed between the soil and subsoil, which proves very injurious unless broken up by deeper plowing.

Analyses of Soils.

During the past ten years there has arisen a class of men, who at all times were willing to make all the processes of agriculture depend upon the announcements which were to come from the laboratory of the chemist. A few samples of the soil of a field were carefully put in paper, or were bottled up in vials and labeled, and dispatched to a medium, who advertised to pronounce, after a careful analysis, just what any field might need to make it grow any crop, in any given quantity. According to the notions which they promulgated, it was just as easy to grow a crop of wheat on a field of dry sand, as it was on the best limestone soil, that ever lay "out of doors;" and so with all other crops, these mediums would prescribe as quickly for a soil, as a spirit rapper for a diseased human being. In fact the processes were very much alike. The analyst had a little vial of earth sent him from a distance, the spirit rapper had a lock of the hair of the patient to manipulate. As a matter of course, the one judged about as correctly of the condition of the field, as the other did of the state of the human body. But both had the faculty of clothing the results of their examinations in a semi-classic jargon, which had all the ring of true science, and the dupes who consulted them were for the most part well satisfied, until at last the manifest utter worthlessness of the prescriptions, raised some doubt as to the value of the opinion of the analyst, which became with the lapse of time, certainties so fixed, that the very word analysis would raise a smile of contempt on the faces of those who had paid their five and ten dollars, no matter how appropriately it might be used.

It is far from our purpose to cast a slur upon the services which science has rendered to agriculture; but there was a time when it was actually believed that science was to do everything, and practical ability nothing. That time is past for the present, but there remain a few amongst us who would seem still to have a cringing desire to make us believe that the knowledge of the "elements" was of far more importance than to know how to handle a plow, or to swing or sharpen a scythe. Even the most scientific

of the professors themselves have been carried away with the idea that the time had come when they could compel the earth to yield at their mere bidding, and with no labor. Liebig, the most celebrated of them, invested a great part of his means in the manufacture of a compound that was to prove more fertilizing than guano, and which would be of general application. The great chemist found out his mistake, after dear bought experience; his compound proving totally worthless in its application to the growth of crops. S. W. Johnson, an editorial correspondent of the *Country Gentleman*, who is at present pursuing a course of chemical instruction at Munich, in Germany, in a recent letter, gives strong testimony as to the uncertainty and imperfection of the results obtained from the best and most carefully conducted analyses, even when performed by men of the utmost science. He says, "Boussingault long ago pronounced them *more curious than useful.*" Stockhardt, (one of the most eminent of the German school of agricultural chemists,) in his lectures, published in 1853, on agricultural chemistry, declares that "to estimate the productive quality of a soil by chemical analysis, is at this time impossible, and will indeed, remain impossible."

The same writer mentions an instance in which three samples of 14 different soils were selected, and distributed to several chemists to analyse. The chemists selected were such men as Liebig, Rose, and others of a like reputation. Out of the 42 analyses, no two were alike in all particulars. Of course the analyses of each soil approximated in a greater or less degree, but in some of the soils very important elements were found by some of the chemists, while other chemists reported their analysis without being able to find the same element. The same writer adds:

"The addition of a ton of guano to an acre of soil, would make no perceptible difference in the results of an analysis! But the farmer knows that a soil now giving a moderate crop, will often yield a very heavy one, by adding to it a few hundred weight of guano, and be totally spoiled for several years, on addition of a ton. Yet chemical analysis would give him results practically identical in all these cases.

"Practice has taught that exhausted land often recovers its fertility wonderfully, by laying a season or two in fallow. Yet in this case nothing is added to the soil. On the contrary, its organic matter must waste by the ordinary process of decay. The renewal of fertility, depends merely upon a change in the *condition* of the soil. Ingredients before insoluble, become soluble and available; but analysis, at present, is by no means able to follow, and estimate these changes. In fact, if it be admitted that the chemist can estimate *quantities* with the utmost accuracy and nicety desirable, yet he cannot set *qualities, conditions*, in their true light. His attempts at this must ever remain vague and unsatisfactory; for the soil is the subject of perpetual changes, which he can only imperfectly understand, much less imitate.

"So much depends upon the *physical* condition of the soil, that analysis alone, can form no safe basis of judgment. Nothing but lichens and mosses will grow on a block of granite. Reduce the granite to pieces as large as pins-heads, and it forms a poor soil. But grind it to a fine, impalpable dust, and wheat sown in it will grow and mature, if it have suitable weather. Yet granite is granite, "though it be brayed in a mortar." It contains the needful inorganic elements, but they are slowly soluble in water. Increase the surface on which water may exercise its solvent action, a million or a million million times, as is done by pulverization; and we proportionately increase the quantity of matter, which the granite may yield to water and to plants in a given time. By simple pulverization, we may convert a mountain of rock into a field, in which the tender grains will almost reach perfection."

We have been induced to quote these remarks relative to the analysis of soils, because we observe from several communications, which have reached us lately, there appears to be a great stress laid upon the benefits to be derived from a knowledge of the analysis of the soils of particular fields, as if there were some peculiar applications which would aid them, far more than good cultivation and the manure heap. There may be something that would prove advantageous for a short time, as a temporary stimulant, but at last the farmer who tries them will find that he will have to return to the first principles of deep plowing, and thorough cultivation, and that stimulants exhaust in proportion to their power of forcing an unnatural yield.

Hillsdale Milk Cows.

Mr. Editor:—Noticing in your valuable paper communications from various parts of our own State, as well as from others, respecting the good qualities of milk cows, and hearing nothing from Hillsdale, I am prompted to send you the following note, of which you can make such use as you deem proper. There are agricultural interests to be developed here as well as elsewhere, and Hillsdale must speak and let herself be known, if she would have fair play.

Being a small farmer in the old way, the main thing with me is to make the most of a little. I have three cows which my neighbors say are good, but I have seen better. It is of a part of the products of these cows that I wish to inform your readers. Not thinking to make the account public, the only statistics I can give you will be of what I have sold. We made cheese during the summer; one cow being a winter, and the other two summer cows. Our family has numbered six most of the time; we use what butter and cheese we want, but of this I can give no exact account. I have sold 455 lbs. of butter, at from 12½ to 20 cents per pound—ranging generally at about 16 cents. This, with 40 lbs on hand which I will reckon at a shilling, though I don't intend to sell it for that, and the cheese, which sold at from 6 to 12½ cents, ranging mostly at 9 cents per pound, amounts to $113.56.

The calves I vealed at five and six weeks old; their value is not reckoned in, but they were worth not less than $15.00.

This may not be so great an amount as some may be able to show, but even at this rate who will say that cows are not profitable? Yet with the best of cows, much care and good management are necessary in the dairy; but there as well as elsewhere experience and observation will teach many profitable lessons.

I stable my cows and stall feed them twice a day when they give milk during the winter.

N. D. Howe.

Moscow, Hillsdale County, June, 1854.

A LETTER FROM CALIFORNIA.

Editor Michigan Farmer: *Dear Sir*—I see by the papers that occasionally reach us from the Atlantic States, that many curious speculations are indulged in respecting California, its mining and agricultural resources. Some of these papers inform their readers that the placers, or surface mines are nearly exhausted, and the hills won't pay, pointing to the decrease in amount of dust shipped as proof positive that this is a used up country. On the other hand, our California prints teem with glowing accounts of new diggings discovered, great strike, miners doing better than ever before, &c. New comers reading these accounts, and taking them for truth, will think little more is necessary than to reach the mines, make their piles at their leisure, and return home rich. Now while one side asserts what is false, at least in part, concerning the failure of the mines, the other side, if not asserting actual falsehoods in regard to the big strikes, convey an equally erroneous impression to the uninitiated.—Mining will be carried on here successfully for a long time to come, probably for ages. The amount of gold actually taken out will not show a very rapid decline, though it will undoubtedly grow less. Of the amount dug a much larger proportion will be retained in future than has been heretofore, from the fact that hereafter the provision market is likely to be supplied from home productions; consequently a decided falling off in the amount of shipments may be looked for. The establishment of the branch United States mint will also diminish the amount of dust shipped. But while I believe that California will continue for some time to come to produce nearly the same quantity of gold as during the past year, it by no means follows that miners are generally doing as well, or that big strikes are as common as in former years. The prices paid to hired hands at different times is the best evidence by which to judge whether the mines pay as well now as formerly. In the fall of 1848 those who would work for wages could get from $12 to $16 per day; in the spring of 1851 wages varied between $6 and $10 per day; and in July, of 1852, when I reached the mines, from $5 to $6. As emigrants came in, the price went down about 20 per cent., and for the last six months any desired number of hands could be hired at from $75 to $100 per month, and find themselves. Many of the best and oldest miners working for $100 per month rather than risk buying or prospecting a claim for themselves. I have seen hundreds of good men within the last three months who would willingly work for $50 per month and found, when they could have steady work. A surface mining claim, that is considered sure for a year's work for four men at four dollars a day to the hand, will sell readily for one thousand or more.

The agricultural prospects of this State are decidedly fair in my opinion, for such as come expecting to make this their future home. Of wheat, oats, barley, and all sorts of vegetables, and hay, the same labor here will procure at least one and a half times the amount that it will in Michigan. But for the present I forbear making any comparison between this and the more eastern states. Yours, truly,

Wm. Allen.

Slug Gulch, California, May, 1854.

Mediterranean Wheat.

Mr. Editor: As wheat is one of the great staples of our State, and as it is of the greatest importance to farmers to know which is the most profitable kind to raise, taking all things into consideration—I wish to give a little of my experience on that subject.

Some 17 years ago, I procured from New Jersey a pint of Mediterranean wheat, sowed it, and was well satisfied with the result. I have nearly always raised some of it since; have contrasted it repeatedly, with other varieties, and always, without an exception, have had it prove the most productive—so much so, that at this time I raise no other kind. Some of its advantages are as follows: It yields a more abundant crop; it makes good flour, and a good yield. The bread is decidedly better, although not quite so white as that of some other kinds. It is not effected at all by the fly, which is now becoming very bad in many places. It ripens early, and has not with me ever been subject to rust or smut.

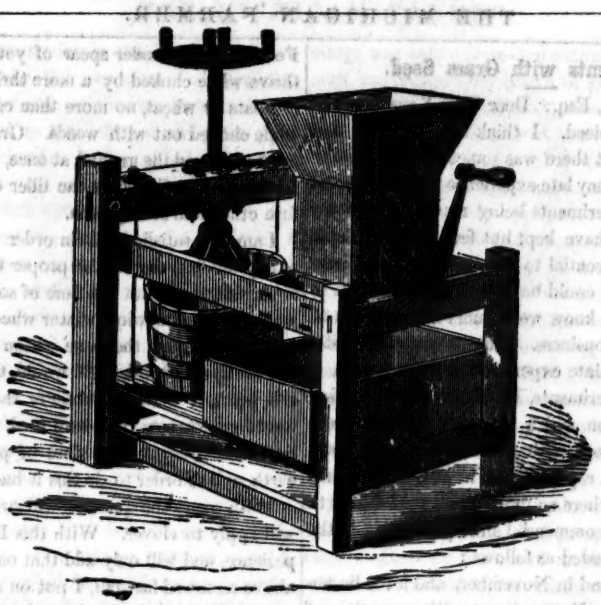
Some would say that buyers would not pay as much per bushel for it as they would for white wheat. That may be true, where there is but little of it raised.

I may safely say that on the Door prairie, Indiana, nineteen twentieths of all the wheat now raised there, is Mediterranean. They find no trouble in selling, and at fair prices. Where but little of it is raised, buyers do not like to mix it with white wheat, on account of its dark color; but notwithstanding, I would prefer to raise it, if I were obliged to sell it ten per cent. less than most other varieties.

I have recently floured a quantity of it. The yield was very good, and the flour excellent. I think that 100 pounds of the offals is worth as much for any kind of stock, as 100 pounds of oats.

I would be glad to furnish seed to any person who would like to try it A. Y. Moore.

Schoolcraft, July 17, 1854.



HICKOCK'S PATENT CIDER MILL.

The above cut will give a very excellent idea of one of the most convenient, and powerful cider mills now offered for sale, or in use. We have examined one of them, now at Penfield's agricultural store in this city, and without seeing it actually tried, but judging only from its convenient arrangement, its power, and its mode of operation, it must prove satisfactory as a machine to extract the juice from apples. This mill has been before the public for three years, and like all machines of a like nature, has been undergoing improvements each year, until it is now presented in its present perfect state.

The mill for grinding, as it will be seen by reference to the cut, has a trough underneath it, from which the pomace may be shovelled into the round tub which is placed in the rear, underneath the powerful screw press, which is easily worked to any amount of pressure, by hand. The mill when run steadily, and with as much speed as one man could reasonably exert, will grind at the rate of a bushel of apples per minute, and the whole concern when thoroughly run, with hands enough to feed, to press, and to clear off the pomace and cider as fast as pressed out, may be made to yield thirty to forty barrels of cider per day.

The mill we examined was strong and substantial in its make, all its parts well put together, and not liable to get out of order. The machine is a good one, and before going to the expense of putting up one of the old fashioned screw concerns, we believe it would pay better to use one of these, even if there was a couple of screws already on the premises; both because more cider could be obtained from the same amount of apples, and because it is handier and more easily worked.

A Curious Worm.—T. E. Wetmore, of North Cannon, Kent county, Michigan, writes to the Journal of the New York Agricultural Society, relative to a worm that injures the trees in his nursery, as follows:

"I have a small nursery for my own use, and I find a worm that does injury to the young trees by denuding their lower portion of leaves. It is so different from other worms, in its plan of operations, that it is a curiosity to me. It burrows in the ground, and comes up a viaduct composed of particles of earth, glued together by a sort of glutinous matter, which gives the internal surface of the tube the appearance of a soft lining of silk. By this means the worm conceals itself from observation as it preys on the vegetation. The tube terminates some two or three inches below the surface, in a pouch-like expansion, where the worm lies doubled up, and to which retreat it also drags after it portions of the leaves, to consume at its leisure. The worm appears to be, when full grown, about one inch in length; has three or four (I am not sure which, as I write now without one before me) pairs of black, horny-like feet forward; a black head, and a black cap-like on first ring below the head, and dark dots on all the rings of the body. Some of the worms are brownish, others whitish. If I could convey any of them safely to Dr. Fitch, I should be glad to do so; but I am ignorant how to put them up to send so far safely and alive.

"Just now we are having an easterly rain storm—the rain much needed, but rather cool. No peaches with us this season; other fruits promising fairly. Wheat is more promising than usual; it is heading, and some early sown beginning to blossom. Spring crops are giving fair promise. Prices are good: real estate advancing rapidly. Wages high, and every thing seems to be in a prosperous condition. Yours very cordially."

Experiments with Grass Seed.

R. F. Johnstone, Esq.: Dear Sir—Your favor of the 9th inst. is receieed. I think as you state, that when I saw you last there was something said about reducing to writing my late experience in sowing grass seed. But my experiments being made only for my own satisfaction, I have kept but few items of detail which are highly essential to an experiment, and have concluded that they could be of little or no interest to any one else, as you know we farmers are down on all guess-work in this business. But at your request I will simply give my late experience in the premises.

From former experiments, I had formed the opinion that the principles on which the sowing of the seeds of the different grasses with grain crops was based, were all wrong, and especially so in this peculiar climate of Michigan, where so much grass seed failed to grow; and having commenced an improvement in the fall of 1851, I proceeded as follows:

I broke my ground in November, and let it lie until the next spring. But owing to the quantity of stone and hazel brush, we made a bad job of the breaking, and in May, 1852, without further plowing, I put on a heavy seeding of oats, and dragged it in thoroughly. This was done to keep down the foul stuff until I should have time in the fall to fit it for grass. I took off a heavy crop of oats, and commenced plowing the stubble as soon as the oats were removed. I put on no manure of any kind, but fitted the ground as well as I could by once plowing, and by thorough harrowing. September 25th, I sowed about two acres with timothy seed, putting on 8 quarts to the acre. November 18th, I sowed 2 acres more adjoining, and seeding same as the other. The following summer, (1853) I cut a heavy crop of grass from both pieces, (judged to be two tons of hay to the acre) and there appeared to be no difference between the early and late sown.

April 28, 1853, I sowed grass alone as above, on about two acres adjoining the other, and on ground that had never borne any crop, and which was better prepared than the other ground. On this I got no crop that seeded in the fall of 1852, but the seed took lively, and formed a good sod. The result thus far had been in favor of sowing in the fall, without particular reference to time. But about the first of November last I sowed 3 acres more adjoining the others, which resulted differently. It will be recollected that last fall the drouth continued until within a very short time before cold weather set in, and this seed had but fairly got up when it stopped growing; consequently it winter killed partially, though I got off it half a crop of hay this year, and by throwing on a little more seed early last spring, I have it nicely seeded for another year.

From the above experiments I am more than ever satisfied that all grass seed should be sowed alone.—For a fine and tender spear of young grass will not thrive while choked by a more thrifty growing plant, like oats or wheat, no more than carrots or onions will while choked out with weeds. Grass should also be allowed to sod the ground at once, while it is light and friable, so that the roots can tiller out and expand before other foul stuff gets in.

I am also satisfied that in order to get a good crop of hay the first season, the proper time to sow is early in the fall, say about the time of sowing wheat. Who would think of sowing winter wheat in the spring, expecting a harvest the same season?

Perhaps nature herself would teach us a lesson on this point, if we would observe the time that the different grasses sow their own seed; for it may be recollected she designed the class of plants to cover the earth, and in order to do this it had to be a self-sower.

With many the question will arise how this theory will apply to clover. With this I have had little experience, and will only add that on the lot referred to above as sowed last fall, I put on a small strip of the same half a pound of white clover seed. This only formed the third leaf last fall, and yet it stood the winter. My opinion is that clover above all other grasses ought to be sowed in the fall, so as to have the benefit of both fall and spring in getting deeply rooted before our summer drouths come in. I ought to have added in another place that at about the time referred to of sowing grass alone in the spring, I sowed a similar piece putting oats with it, and the grass almost entirely failed.

I have some other experiments in progress which perhaps might be interesting to you, should you happen this way. Yours,

S. O. Knapp.

Jackson, July 20, 1854.

From the Michigan Argus.

Pure Water for Cattle.

Mr. Editor:—In the early settlement of Washtenaw county, as long ago as the year 1828, I lost two or three good working oxen, with a disease at that time new and unfamiliar, but which has since become known as the Bloody Murrain. Droves of working oxen and cows were brought from the state of Ohio in those early times, and the farmer beginning on a new farm was compelled to let his cattle run in the woods during most of the summer season. At that time, I was at a loss to know the *real* cause of the new disease; but since, by much experience, have come to a satisfactory conclusion. I believe that the disease is occasioned by leeches taken into the stomach when the cattle quaff the impure water upon our marshes and at the stagnant ponds. This disease was more common and fatal in those early days than at the present. For these reasons I deem it proper to state the following facts which seem to show that this disease is produced by leeches taken up with the water drank by the cattle. Besides, these facts may be

of *some* value to new settlers in the West, by directing their attention to the importance of supplying their stock with pure and wholesome water. When farmers have cleared up their farms, and keep their stock in good enclosures, and supplied with pure water during the summer season, very little complaint is heard of loss by this disease.

After having lost two or three of my cattle, I opened them, and upon examination found leeches in their stomachs. The leeches were much distended by the blood they had evidently extracted, and which proved to be pure blood. As my residence at that time was near a large marsh at which my cattle were accustomed to drink, I concluded to examine the water, which was found to contain leeches in abundance. I immediately put my cattle into a good enclosure supplied with pure water, and have never since been troubled with any loss by leeches. This seems to show very conclusively that leeches are the sole cause of this disease. Yet, being a common man, I confine myself to practical facts and leave this subject to be investigated by educated and scientific men. —*Anonymous.*

Rambles.

BY S. B. NOBLE.

Troy.—As you go north from Royal Oak, you soon enter the town of Troy, which is one of the best towns of Oakland county. For fine farms, highly cultivated; good farm buildings; large orchards; for its numerous flocks of sheep; its cattle and horses; its general appearance, showing thrift, comfort and wealth, Troy is hardly equalled by any town in Michigan.

Passing through the town of Farmington, by invitation we put up with Stephen Brown, Esq., about one mile from Farmington village. We enjoyed the hospitality of himself and lady, and were much pleased with our visit. Mr. Brown has a farm possessing a good soil, which he is fast getting under good cultivation. His flock of Spanish sheep have heavy fleeces of fine fibre, and appear healthy; his young horses are good; he showed us a pair of working cattle, for which he refused one hundred and sixty dollars; they are fine animals. He is preparing to drain a piece of low ground with drain tile; this he can undoubtedly do, and it is just the way to bring a large quantity of our Michigan lands to increased productiveness. The farm of Mr. B. is in the vicinity of the farms of Mr. Collins, Mr. Murray and others, all of which possess value for their good cultivation and richness of soil, and by their location have easy access to the Detroit market.

While at Mr. Brown's we were examining some bee-hives which had lately been attacked by the bee moth; we had a *feeling* demonstration of the power of the honey bee to use the weapon provided for them by nature for their protection. One of their stings was safely deposited among the nerves of the neck, and immediately began to swell and be exceedingly painful. We applied about two drops of a strong solution of ammonia, the common *aqua ammonia* of the shops; the relief was instantaneous, the pain abated, the swelling subsided, and in less than two minutes after the application we should not have known that we had been stung, from any unpleasant sensation in consequence. It is said that a strong solution of pearlash or saleratus will have the same effect to cure the sting of bees, wasps, &c.

Farmington village is assuming a business-like appearance; it has 3 churches, 2 flouring mills, stores, mechanics' shops, and other establishments to give it life. The plank road from Detroit to Lansing passes through this place, and has a large amount of travel, and a daily line of stages.

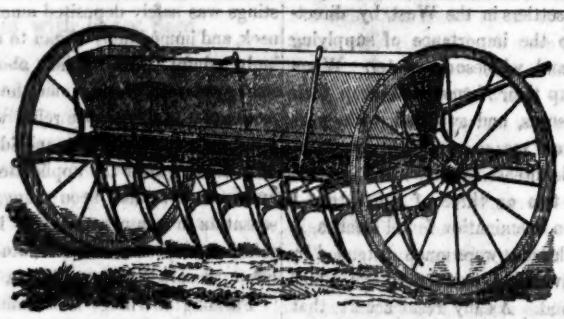
Northville—situated in the town of Plymouth, gives evidence of increasing prosperity, and does a large business for a place of its size. It is connected with the village of Plymouth by a good plank road, passing through the little village of Meadsmill. This is the residence of Amos Mead, Esq., who for twenty-nine years has been a resident of the towns of Farmington and Plymouth, and by whom the former proprietors of the *Michigan Farmer* have been favored with many kind offices, when the *Farmer* was struggling for life; he has also been a valuable correspondent for its columns, which have been enriched by his communications. We hope his efforts for the success of agriculture will be continued.

Drain-tile.—A little west of Northville is the drain-tile manufactory of Messrs. A. & J. H. Hannon, who are successfully engaged in making large quantities of tile. They have commenced their manufacture for a permanent business, and we hope success will crown their efforts.

Farther west is the farm of A. Plumsted, who, although bred a mechanic, in his new vocation fully sustains his well-earned reputation for industry and enterprise. His farm looks well—his stock is good. We viewed his flock of over one hundred Spanish sheep, which appear to be cared for. Mr. P. says he can produce as many pounds of mutton with as little expense from Spanish sheep, as can be produced from the Leicestershire or other large breeds.

Mr. Plumsted, like J. R. Kellogg, of Allegan, deplores the loss of some valuable plum trees, by the use of tar, to prevent the ravages of the curculio. In almost every instance that has come under our observation, where tar has been applied to plum trees, it has resulted either in their death, or to their material injury.

Mr. Gates, a good farmer west of Plymouth village, showed us some good specimens of grade cattle, cows, heifers and steers. Mr. G. will soon have a fine herd of cattle. The farmers of Plymouth and Farmington are fully up to their neighbors in the quantity and quality of their stock. The stock of Michigan is fast increasing in value.

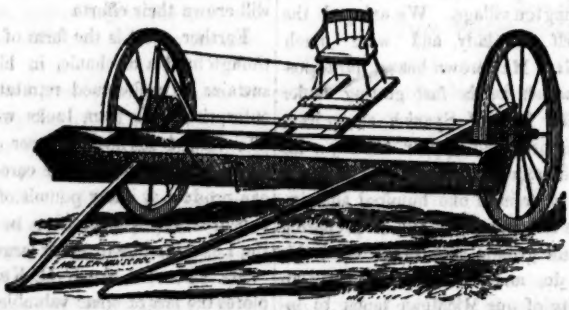


SEYMOUR'S PATENT GRAIN DRILL.

Among the inventions to which the attention of agricultural implement makers has been turned, none have elicited more than the construction of machines which would put small seeds into the ground evenly, and at uniform depth. The above is one of the most successful attempts to meet this want, and bore off the first premium at the great trial at Geneva, N. Y. At the same time it must be remembered, that to judge of the capability of a seed drill, is not such an easy matter as to judge of the work of a mowing or a thrashing machine, where the results of their operation may be seen immediately. To test a drilling machine, the right plan is to wait until the seed planted by it is able to testify for or against it. Seymour's machine, since it was first put in the field in 1849, has undergone many important alterations, each one intended to bring it nearer perfection, and it is now considered one of the best in use.

Among the recommendations appended to Mr. Seymour's advertisement, is one from a well known, skilful practical farmer of this state, upon whose judgment in such a matter, where we have not had an opportunity to observe for ourselves, we should rely as readily as upon that of any man we know. We refer to the letter of S. G. Pattison, of Marengo, in this state.

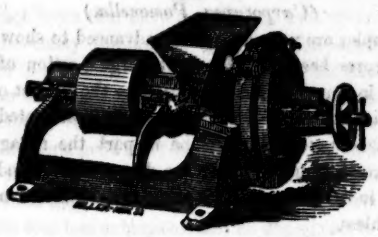
The drilling of wheat is looked upon as the most profitable mode. We are well aware that there are many that doubt its economy, and who dispute that it is a mode of sowing which secures the largest crops —but the weight of testimony is in favor of the use of the drill. In cases where it has failed, the fault has not been in the mere drilling, but in the prepation of the soil for the use of the drill. No man need expect that he can do his plowing and harrowing in a slovenly manner, and rely upon the drill to perform a portion of the work of the plow and the harrow, and its own too. Nor need we expect the drill to work to any advantage among stumps and stones. Where a farmer has not removed these incumbrances, he must let drill machines alone, and content himself with the old fashioned, two-legged and two-armed broadcast sower.



SEYMOUR'S PATENT BROADCAST SOWING MACHINE.

If there is another broadcast sowing machine, equal to this one of Seymour's, or indeed of any kind, we are not aware of it. It has been coming into very extended use since its first invention; and so great is the demand for them, that they cannot be furnished by the manufacturers as fast as wanted. For the sowing of combinations of different grains, with lime, plaster, ashes, or any dry substance intended to manure the ground, it is a very complete instrument, and it will be noticed that Mr. Enos Boughton, of Battle Creek, testifies to its excellence. Of this Broadcast Sower, the committee who attended the state trial at Geneva, New York, speaks as follows: "The indexed arrangement for graduating the delivery is good; the oscillating motion given to the shaft which distributes the seed, is derived from the off wheel, while a slower motion is given by the nigh wheel to metal levers, when used for distributing plaster, bone dust, lime, ashes, or any other special manures. Another excellent feature in this machine is the addition-

al box from which clover or timothy seed can be equally distributed, while at the same time manures can be distributed from the larger box. Thus any combination of seeds and manures may be effected during the deposit of seeds on the soil. The machine is worked by one horse, and it sows a breadth of ten feet.



ROSS' BURR-STONE MILL.

There is no end to improvements in machinery, and especially that which is designed for the use of agriculturalists. The above cut is a very faithful representation of the form of Ross' Burr-stone mills, which has been now in use in several sections of the country for grinding various materials for some years, and which have given, so far as we can learn, very general satisfaction.

As a handy grist-mill, which a farmer can put up and set in motion with an ordinary moveable horse-power, any where, and at any time, it has no superior for compactness and efficiency. For grinding either coarse feed for stock, or fine flour for the family, it is found equally applicable, and it is as easily regulated and set, as a common coffee-mill. It is not liable to get out of order, and its peculiar construction in the form of a cone, always keeps the stones sharp. The following table exhibits the capacities of the various sizes, for grinding corn :

CORN MEAL.	FEED.
No. 1—3 to 4 bushels.	6 bushels per hour.
No. 2—5 to 5 "	8 " " "
No. 3—5 to 6 "	10 " " "
No. 4—8 "	12 to 15 " "

NEW KIND OF WHEAT.—The Niles *Republican* states that Mr. Robert Ready, of Berrien county, left at the office some heads of a new kind of wheat, called the *Washington wheat*. The editor of the *Republican* says, "The heads are near six inches long, and filled with the largest kernels we have ever seen—it is grown from a few kernels which he received from Delaware. This kind of wheat must yield more to the acre than any other kind of wheat known in this country, but we doubt whether it will produce as white flour as other wheat. Mr. Ready this year will hardly have one peck, but he intends to save it carefully to re-sow. These heads may be seen by farmers at our office."

TALL CLOVER.—The editor of the Fentonville *Observer* says that he was shown a stalk of June clover grown on the land of J. S. Merrifield, which measured, five feet three inches in height.

Agricultural Schools.

What is particularly needed at the present time, in order to a successful development of the agricultural resources of our State, is the establishment of Agricultural Schools and Colleges, where a thorough knowledge of agricultural chemistry, together with a practical knowledge of the analysis of soils, grains and manures may be obtained. Hitherto, the necessity for this information has not been so apparent, because our naturally strong soil, which for ages has been gathering fertility, has, in most cases, generally rewarded the husbandman for his labor. But, as a strong and healthy man will, from constant toil, become weak and enervated, so our land, from a course of indiscriminate husbandry, begins to show unmistakable signs of premature exhaustion. How to restore and even increase its original fertility, is the great desideratum.

What would be thought of that physician, who would indiscriminately drug his patients, without understanding the nature of their diseases, or the operation of the medicine he was administering? Yet no less inconsistent is necessarily the course of the farmer, who, ignorant of the elementary constituents of his soils, grains and manures, is compelled to adopt a course of hazardous experiment.

As yet, but little has been done by our government towards establishing Agricultural Schools and Colleges. While millions are annually lavished upon our navy, forts, arsenals, and other means of human destruction, not a cent can be spared to promote the great interests of agriculture, the chief source of the wealth and prosperity of our country! If our government is thus reckless of her best interests, *individual enterprise* must be invoked; and we hope the citizens of our own beautiful State will not be slow in endowing institutions, where their sons may become deeply versed in agricultural lore, which, we think, will be equally as honorable and lucrative as either of the other learned professions.

We think it is not visionary to expect, nor chimerical to suppose that the day is not far distant when every town in our State will be supplied with a *Professional Agriculturalist*, whose duty it will be to make an accurate analysis of our soils, determine what elements are deficient, what manures are necessary to increase their fertility, what crops can be most successfully and profitably grown upon them, and give such other scientific and practical advice as farmers may need—in short, be to the farmer what the skillful physician is to the sick man. Then, and not till then, will farming operations be reduced to a certainty, and the occupation of the farmer be elevated to what it should be, the highest of professions.

J. S. TIBBITS.

Plymouth, July, 1852.

HORTICULTURAL DEPARTMENT.

S. B. NOBLE, EDITOR.

Pomology.

There are few studies more interesting than pomology. With the imperfect knowledge of the science possessed by the ancients, they did much to improve the fruit of their times. New developments have been made at various periods from its first cultivation to the present time. During the past fifty years, by the aid of the science, large accessions have been made to our fruit, and many new varieties produced of superior excellence.

The apple stands at the head. From the small sour crab, have been produced the pippins, greenings and spitzenburghs, and other fine sorts. Next comes the pear—from what Mr. Downing calls "the most *austere* of all fruits, a native of Europe, Western Asia, and China," have been produced all of our choice pears.

From the bitter almond of Persia we have the luscious rare-ripe and melocoton peaches. The acrid wild plum has been changed to our best Gages, Jeffersons, Washingtons, and many others equally good. We might introduce all our small fruits to show the improvements that have been made in them. All this has been accomplished by aid of pomological science, by producing, reproducing and investigating the habits of fruit trees, experimenting and studying the nature and causes of the different diseases of trees, and the habits of the numerous tribes of insects that infests trees and fruit.

A wide field is yet open for operation. Although we are every year presented with new varieties of fruit, it needs discrimination to select the good and reject the poor. New enemies present themselves for notice. Their habits are to be studied, and the best way to destroy the evil.

Our nomenclature is very defective, and should be corrected; to accomplish this, attention should be given to the different varieties of fruit as they begin to ripen; observe the color, size, shape, and time of ripening, giving all the distinct characteristics of the fruit and tree, and the name by which you know it, and send specimens to some pomological convention. This should be done in all cases where doubt exists as to the true name. Our facilities are such at the present day for the diffusion of horticultural information by means of different agricultural publications, that does a new variety of fruit originate in any section of the country, or a new enemy appear, in one week the news will be spread broadcast over the land from Maine to the Rocky Mountains, or from the St. Marie to Texas.

If all that are engaged in the cultivation of fruit will act in the premises, great and lasting good will be the result of the present year's efforts.

Experiments may be made by budding several varieties of fruit in stocks of different habits and hardiness. Perhaps something may be found to dwarf the Pear on, and the Angier Quince abandoned, which to present appearance is not sufficiently hardy for our climate.

Apple Worm.

(Carpocapsa Pomonella.)

Apples are now sufficiently advanced to show that the worm has possession of a large portion of the fruit in many locations. Owing to the almost entire failure of the crop last year, we fondly anticipated that this season we might escape in part the ravages of the worm; but in this we are disappointed—and present indications are that the crop will be nearly worthless.

It is too late to apply a perfect remedy this year, were we in possession of one; but yet much may be done to prevent future depredations. At this season of the year the larva begins to leave the apple, and finds some secure place under the loose bark of the tree, or near it, and covers itself with a white net, and becomes a pupa. In a few days after the moth appears, and is soon prepared to provide for another progeny. In this way it keeps multiplying itself until fall, although in numbers less than the first brood.

We have to-day (July 17,) examined the body of a large apple tree, and found under the loose bark, cocoons which the moth had to appearance just left.—Others we found in the chrysalis state, while some were in the act of making their web; others just enclosed, and we found some larva apparently selecting a place in which to undergo their transformation.—The larva when about to leave the apple, vary in length from three-eighths to three-fourths of an inch with a black or brown head, and a few colored rings around the body. They are quick and lively in their motions, easily irritated, and wage a defensive war when molested. In one instance a person with us in the examination was bitten in the finger by one of them. In Mr. Downing's "Fruit and Fruit Trees," page 67, it is said that if an old cloth is placed in the crotch of the tree about the time the fruit begins to drop, the apple worm will make it a resting place, and thousands may be caught and killed from time to time." Wisps of hay, straw or weeds placed among the branches, or wound around the body of the tree, may be equally beneficial. Mr. Downing also says, "we cannot too much insist on the efficacy of small bonfires lighted in the evening, by which myriads of this and all other moths may be destroyed."

It is an object for all that can to fence off their orchards, and permit hogs to have free access to eat the fallen apples.

We wish again to sound the alarm to all fruit growers, and all interested, that present indications are, that from one to three years more, and our entire

apple crop is destroyed, unless something is speedily done to avert the calamity. Let the best means now known be used; let experiments be made, and the result of them published for the benefit of others; let old and young, all begin in earnest to route the enemy and the work of destruction is sure.

Over-loaded Peach Trees.

Peach trees that have a surplus of fruit upon them may be easily thinned by adopting the *shortening* system of pruning. It is unquestionably the best way to trim the peach, to make it productive and keep it in handsome shape. Cut off the half or two-thirds of the last year's growth of wood, as it is only such that bears fruit. The peaches that will be left will be worth more than the whole would be if suffered to remain, and the tree less exhausted; and an abundance of new shoots will put out for next year's fruit.

Peach Worm.

Of all the remedies recommended to prevent the ravages of the peach worm, we have tried none more successfully than the application of from one to eight quarts of leached or unleached ashes around the bole of the tree. Before applying the ashes destroy all the worms you can by picking them out with a large needle or pen-knife. Their presence is known by the gum that exudes from the tree where they are at work.

Ripening Pears.

Many varieties of pears if suffered to ripen on the trees, are dry and worthless—but if picked before ripe and placed within doors in a warm room to ripen, they are melting, juicy, and of fine flavor. This we believe is applicable to nearly all varieties. The proper time to pick them is when they begin to change color, or when some of the imperfect ones fall to the ground.—They should always be picked by hand, and never shaken from the trees.

Half hardy Trees and Shrubs.

Those who have introduced into their gardens trees or shrubs that are not fully acclimated, and do not endure one severe winter, may render them more hardy by pinching off the leading bud. This retards the growth, and permits the wood to become riper, and matured sufficiently to withstand severe cold. The catalpa is a half hardy tree, and, and by preserving the course above, we have it now so hardy that for five years past, it has not been winter killed. It blossoms handsomely, and makes good growth.

The Peach Worm.—A Michigan correspondent of the *Horticulturist* writes, that he applied lime to two peach trees last year, in the following manner, to prevent the attacks of the peach worm :—"The earth was removed so as to form a basin around the tree, four or five inches deep ; this cavity was filled with what masons call putty, that is, a paste made of lime, rising two or three inches above the surface of the ground. This formed a cement impenetrable to the grub; and on examining these two trees a few days since, they were found free from worms, while others standing near, which were treated differently, were seriously injured by them. Whether any bad results might follow the application of this remedy to very young trees, or when growing rapidly, or whether it would be as successful as in this instance, is yet to be be determined."

A Peach Tree in a Tansy bed.

A subscriber of ours has a yard full of peach trees, one of which is located in the midst of a bed of tansy. This tree is by far the most thrifty in the yard, being full of fruit, and green and healthy in appearance, while the others are decaying or suffering from the attacks of the peach worm or grub. Does any one know that tansy has the effect of preventing the attack of the peach worm ?

The Curculio.—A subscriber says that his way of getting rid of the curculio is to set his hens so early that he can coop them with about a dozen of chickens under each plum tree, and then by giving the trees a jar once or twice a day, the insects are all destroyed, and the fruit saved. He had tried all the other modes, but this was the most effectual.

Dwarf Pears.

Mr. Editor : I see in the last number of the *Farmer* an article of yours on dwarf pears, which is very much to the point.

As I have had a good deal of experience in raising dwarfs, and have a dwarf orchard of some 500 varieties, some years planted, I will give you some of my experience.

I find on the true Angiers quince almost all the varieties grow freely, while on the common quince only a few will grow. Still, many varieties do not continue to grow in a healthy state for any length of time. If a tree gets once stunted, there is little chance of its ever recovering so as to be a healthy tree, and nearly all the trees peddled about are more or less stunted.

Purchasers should examine the trees in the nursery rows themselves, before buying, when they could easily judge what trees and what varieties are perfectly good and suitable, or they should send their orders to nurserymen they can depend on for supplying a genuine and thrifty article.

I have trees propagated from nearly every variety in my nursery. Several hundred of such varieties appear to be perfectly suitable to the quince stock, and many, more especially of the newer varieties, grow with the greatest luxuriance.

But to cultivate dwarf pears properly and with certainty in this climate, they must be mulched twice

a year—once in June or early in July, digging it in slightly in October; second in December, digging it in again in April. The roots of the quince are so much nearer the surface than the pear, that they are more readily affected with the droughts of summer and the frosts of winter.

Last winter was severe on unprotected dwarf pears. In wet ground those in nursery rows were nearly all killed, and the same in sandy soil. Strong clayey loam sufficiently dry that water won't stand on it, is the best soil. On such there is little trouble in cultivating them, and they are much superior to standard Pears. When planted on sandy soils, mulching is indispensable.

I may give you a list of varieties suitable for the quince in time for fall planting.

Yours, truly, JAMES DOUGALL.

Windsor Nurseries, July 20, '54.

The American Pomological Society.

The American Pomological Society meets in Boston this season, and are making preparations to render the convention more than usually *fruit*ful in the information it may be able to lay before the public, and fruit-growers especially. The chairman of the fruit committee, is that indefatigable pomologist, Samuel Walker, Esq., of Roxbury, Massachusetts. He has addressed to the chairman of each state committee a circular, stating what kinds of information are wanted relative to the fruits growing in the several states. We publish the circular, with the hope that all who may be interested in growing fruits, or who are making observations on them, may be induced to forward to the convention whatever notes they may think worth communicating. We are not yet aware who has been appointed the chairman of the committee for this state. The circular is as follows:

DEAR SIR:—The Constitution of this Society provides that there shall be in each State a standing Fruit Committee, of five members; and of the Committee for the State of the gentleman whom I have the honor to address was appointed Chairman, with power to fill any and all vacancies in his Committee.

At the meeting of the Society to be held some time during the present year, an important and delicate duty is to be discharged, namely—to present to the country a full list of the fruits that are worthy of cultivation, and, as well, of those that cannot be recommended. In the preparation of these lists, the Society will naturally, and very properly, look to the various State Committees for well-digested information, to aid them in their labors, and to guide them in their decisions.

This single view of the case, (and there are others that could be presented,) will alone show how important it is, that the State Fruit Committees should be organized and at work, in good season; and that they should labor in concert, as the only means of obtaining systematic and satisfactory results.

If the Committee for your State is not already appointed, I trust that you will at once (as you are fully authorized by the Society to do,) select and appoint four competent persons to be your associates; and that you will call together this Committee *at the season of maturity* of such fruits as abound or excel in your State, to examine specimens and elicit information concerning them; and that you will furnish me with a Report for your State, previous to the Society's next meeting.

To render the various returns more systematic and thorough, it has appeared to me best to adopt for our guidance, the present year, the recommendations and forms contained in the circular letter of my predecessor, the lamented DOWNING, which are in substance as follows:—

The State Committee will endeavor to ascertain these points, viz:—

First.—Upon what kinds of natural soils, superior kinds of any of the standard fruits are grown in your State; particularly whether lime or potash abounds in the soil or subsoil; whose decomposition furnishes these, or other mineral substances, essential to the perfection of the fruit.

1. If the result has been obtained by the use of manures, or any peculiar system of cultivation, what kinds of manures or composts have been applied:—how, and when; and upon what kind of natural soil. Also, what mode of culture has been pursued.

2. In districts remarkable for the excellence of a given variety of good fruit, ascertain if such is the case upon *various soils* in such district, or only upon particular soils; and in the latter case, the character of such soil. Also, how large are the annual crops; and how long the variety has been in cultivation.

Second.—What are the most profitable market fruits of good quality in your State. Also, the best fruits for the table; and whether any particular sorts require extra pruning, manuring, or other peculiar mode of culture.

1. Which varieties succeed *only*, and which thrive best, upon particular stock, (as the *Louise Bonne de Jersey* Pear on Quince, &c.)

2. What varieties have been tried and condemned as inferior, or worthless, by experienced fruit growers in your State.

3. What are the synonymous, or local names, by which any standard varieties are known in your State.

4. Whether the trees of any particular varieties are particularly liable to blight, or other and what diseases.

5. What Grapes are the best for vineyard culture; (if vineyards are planted in your State.)

6. What Raspberries, Strawberries, Currants, Apricots, Nectarines, and other minor fruits of good quality, are found best adapted to culture in your State.

To arrive at uniformity in judging of the flavor of fruits, it will be well to use the comparative degrees of merit used at the Convention, viz:—GOOD, VERY GOOD, BEST.—And that we may agree regarding these terms, certain standard sorts should be taken as representatives of these classes, wherewith to compare other fruits, and ascertain their value.

The followidg form, and the varieties therein named, will serve as examples for this purpose:

	Good.	*Very Good.*	*Best.*
APPLES	Malden's Blush.	Gravenstein	Esopus Spitzenburgh.
PEARS	Napoleon.	Bartlett.	Seckel.
PLUMS	Lombard.	Washington.	Green Gage.
CHERRIES	Black Heart.	Elton.	Black Eagle.
PEACHES	Crawford's Late.	Old Mixon Free.	George IV.

Fruits falling below the rank "*good*," (excepting culinary sorts,) are unworthy of cultivation, unless their hardihood and productiveness are so remarkable, as to make them valuable in particular localities, or for market cultivation.

Though the attention of this Committee is understood to be chiefly directed to acquiring information regarding varieties of fruit already known, yet some attention should be paid to the examination of remarkable *new* varieties.—Unless the latter, however, rank as high as "good," they ought not to receive attention; and a new sort, even if excellent, if it is also meagre, unhealthy, or unproductive, is unworthy of notice,

When a variety of "very good," or "best" quality is presented to the examination of a State Committee, and there are doubts whether it is really a new variety, specimens should be sent to the Chairman of the Fruit Committee at Boston, Philadelphia, or the Chairman of this Committee, so that it may be subjected to more complete examination. Outlines, also, and careful descriptions of new varieties of high merit in all respects should be made for the use of the Society. In drawing up such *descriptions*, the "Pomological Rules" adopted by the various Horticultural Societies, should be followed as a guide, in order to avoid diffuseness and variety of terms on the one hand, or imperfection in details on the other. SAMUEL WALKER,

Chairman General Fruit Committee.

DIELYTRA SPECTABILIS.

A New Hardy Ornamental Plant.

The horticultural journals speak in terms of unqualified praise of the *Dielytra spectabilis* as a plant which is fast gaining a position in all gardens which pretend to have a choice selection of plants, and as one that will repay the care which may be bestowed upon it by amateurs. We have seen it mentioned frequently, within the last five years, by English horticultnral journals; and during that time it has been introduced into the nurseries and gardens of the florists on this side of the Atlantic, and found to be very suitable to our climate. The July number of the *Horticulturist* speaks of the Dielytra in terms of unqualified praise, and informs us that Abijah Reed, Esq., of Hulberton, Orleans county, N. Y., has some fine specimens of it, and that he considers it "one of the finest hardy herbaceous border plants he has seen." It seems to be adapted either to house or garden culture, repaying the parlor culturist with a richer bloom than either a Pelargonium or a Chrysanthemum, and requiring no more care; and at the same time, as easy to propagate as a Dahlia or a Pæony in the garden. Like the two latter plants, it requires a rich, deep soil,—the richer the better. The *Horticulturis* says, "To see a plant measuring three or four feet in diameter, and bearing twenty or thirty flower stalks, each with numerous gracefully drooping racemes of the most unique and brilliant rosy flowers, is to see the *Dielytra* as it should be. We beg to assure our readers that whatever has been said in praise of this plant, has not been exaggerated—that it is no novelty lauded to-day to win its favor with the public, and in six months hence to be cast aside as a "humbug."

The plant was originally sent from China by that indefatigable collector for the London Horticultural Society, Mr. Fortune, about ten years ago, and since then it has been extensively propagated throughout the most choice collections of plants grown in Europe. The Chinese name of the plant is *Hong-pak-Moutan-wha*, which name they gave it on account of the foliage resembling the Moutan Pæony, and because they are red and white. The engraving of the plant which we present above, is taken from the *Horticulturist* for July, and gives a very good idea of the habit of growth of the plant, as well as its appearance when in flower.

☞ Lima Bean vines are usually suffered to wind themselves around a pole 12 or 15 feet high, and before the vine reaches the top of the pole, some beans are already of a size to be pulled, near its bottom.—Lima Beans should be pinched off when 5½ feet high, and they will readily throw out side shoots well filled with pods, which will ripen before frost; whereas, when not shortened in, the beans on the upper ends of the vine cannot perfect themselves in time to be saved. It is unfair to expect a gill of sap to travel through 50 feet of the vine wrapped around a pole, and make a perfect bean at the extreme end of it. The immense amount of imperfect and half-formed vine through which it has to travel, causes too great an evaporation of moisture before arriving at its point of destination. The Lima Bean with us is an exotic, and its behavior during growth is very different from its habit where native, and therefore the mode of cultivation, as with the tomato, peach, &c., must compensate for these differences.—*Working Farmer.*

LADIES' DEPARTMENT.

Editorial Remarks.

Since the copy for the July number of the *Farmer* was placed in the printer's hands, we have received several additional communications in reply to S. A. T. The writers will observe by our last issue, that the ground they take has all been occupied; there seems to be but one opinion on the subject, and that is that S. A. T. is behind the times, and has done great injustice to farmers' daughters,—and a publication of the letters last received would be but a repetition of what has already been said. Our lady friends will perceive this,—and now that they have proved that the farmers' daughters of Michigan are not lacking in spirit or talent, when prejudice or ignorance invade their proper dominions, or trespass on their rights and privileges, we hope they will further prove their ability to aid and instruct each other in the various branches of domestic economy. It is not vanity, but a desire to encourage and stimulate our timid friends, that induces us to make public the opinion of a stranger, whose extensive acquaintance with agricultural journals would qualify him to judge of their comparative merits. In speaking of the *Michigan Farmer*, he remarked that the Ladies' Department seemed well sustained, and that the communications in point of originality and practical merit, would compare favorably with those of any journal of the kind in the United States, and they speak well for the female talent of Michigan. The remark was a casual one, and made without any knowledge of our connection with, or interest in the matter. As such it is all the more encouraging.

We give some excellent practical letters in the present number. There are still on hand one or two anonymous communications, not deficient in interest, but too objectionable in style and tone. We like a dash of sprightliness, and an occasional witticism—they give spiciness, life and variety to what might otherwise become too prosy to excite the interest or fix the attention of casual readers. But vulgarity is not sprightliness—slang is not wit—and both are unbecoming, either from the lips or pen of a lady. There is a style of writing bordering upon both, and possessing a certain raciness, which pleases the fancy, more from its singularity, and daring deviations from ordinary rules, than from any superior facilities it gives for the expression of ideas. Of such is the Fanny Fern school; but in aiming to imitate such a model it requires a nicely discriminating judgment, womanly sensibility of rare refinement, a steady hand, and delicate pen, to trace the doubtful lines between sense and nonsense—between true tenderness of feeling and that affected bathos which so often assumes its tone. A refined taste never mistakes rudeness for simplicity—the great error is made in attempting a style that is not natural. An unsuccessful imitation is the worst of all failures. The most ordinary thoughts expressed in a natural manner, and with a good end in view, ever meet with a readier welcome, both from the printer and the public, than the most pompous array of words, affecting to be witty or sensible where neither sense nor wit can be discovered.

We do not altogether reject all anonymous communications sent for publication; at least it is expected that they will possess some higher merit than merely that of occupying room. Thus far we have reason to be proud of our list of lady contributors, and while we thank them for the interest they have manifested, and for the many warm wishes expressed for our success, we beg a continuance of their favors, and urge them to sustain in their department the good reputation they have already won.

MARY MANLY.

[According to promise we give below the story furnished for us last month by "A farmer's daughter." It was written, it will be remembered, for a special purpose, but the good example of the heroine is worthy of general imitation, and we commend it to the attention of farmer's daughters. The writer assures us that in all but the names it is literally true, and we know of more than one neighborhood that could furnish living illustrations of Mary's perseverance and success.—Ed.]

Mary Manly is the daughter of a poor but honest farmer who settled in this State when she was yet a child. The family consisted of the parents and nine children, of whom Mary was the third. The mother was in feeble health; she was able, however, to do some little work, such as light sewing and knitting, in order to relieve her daughter as much as possible, for on her devolved all the other household duties, as she had no sisters old enough to render her any assistance. Precious and few were the opportunities that Mary enjoyed for acquiring knowledge, yet she was reputed the best scholar in the district school, which, notwithstanding her mother's inefficiency, she generally managed to attend during three months of each winter; and it was there that she acquired the elements of that knowledge which won for her the enviable position she has since maintained in the society in which she moves.

Dear reader, if you would know how she accomplished so much, go with me and watch her through the duties of a single day. At this time, in addition to the family, there are two hired men who are engaged in breaking up a piece of new ground. All the duties of housekeeping fall upon Mary, and she is not yet sixteen. She rises at the early dawn, long before any one else has stirred in the house. The interval between this and the time for commencing her daily labor is spent in studying a work on astronomy, which she procured at the school library. In this way

she has acquired considerable knowledge of that science, as well as of many others. An hour has passed, and now we see Mary in the kitchen, engaged in preparing breakfast, which is ready before six o'clock.—After this two or three hours are spent in washing dishes, making beds, taking care of the milk, churning, mopping, and preparing vegetables for dinner.—At nine o'clock we see her seated at her sewing; she has changed her toilet, and though she wears a "shilling calico" dress, looks quite as much like a lady as many who flaunt their silks and "walk the street" for display. She sews as if her life depended on it, and by the time the clock strikes eleven she has finished the garment, and, laying it aside, proceeds to prepare the dinner. The afternoon is spent in a similar manner, while the evening is passed in knitting for herself.

Gentle reader, follow her to her chamber when the day's work is done. The book of science is untouched now; but in its place is the Book of Life; and while she reads the words of Him who "spake as never man spake," her mind is enlightened, her heart improved, and she is inspired with new courage to struggle on in the path of duty.

It was thus for years that Mary Manly labored on, learning those lessons of patience and self-denial, so necessary to enable woman to perform properly the duties of after life. Gradually, however, time wrought its changes in her family. The younger sisters grew up to assist, and finally have taken most of the care off her hands. Her elder brothers have been from home several years, the one to seek knowledge and fame in literary pursuits, while into the hands of the other the golden mines of California have yielded a share of their treasures.

Our heroine, though still in the morning of life, has become a literary character of no mean pretensions, as some of her recent contributions to a certain magazine will attest.

And now let me advise those of our farmer's daughters who "walk the streets from morning till night, to display their shilling calicoes and cheap bonnets," if indeed any such there be, which I shall have the presumption to doubt, to go and do likewise, then with a clear conscience and an able pen can they disprove and resent the calumnies aimed at their sex and class.

A Friend of Farmer's Daughters.

Reply to the Editor, on Butter Making.

Editor Michigan Farmer:—*Sir*—I observed in the June number of the *Farmer* an article from yourself, relating to household economy, but more particularly to the management of the kitchen and dairy, showing the urgent necessity for reforms and improvements in these departments which belong especially to women. Both as a farmer's wife and daughter, I feel compelled to take my pen and answer for myself. I am not in the habit of writing for the press, but cannot altogether hold my peace,, when our kitchens and dairies are presented to the public in such a light. Neither can I, for the life of me, Mr. Editor, tell where you find spectacles which enable you to look through your city market butter into the management of our dairies. I am quite willing to acknowledge the ample room there is for improvement in these departments, but am not quite willing to be unqualifiedly condemned as a housekeeper, because of the bad quality of butter which is found in your market. But as we are called upon to redeem our credit, and as hot water is to be the redeeming principle in this work of reform, it follows that cauldron kettles and hickory clubs are the most efficient weapons we can use for the accomplishment of our object.

But, Sir, does the trouble *begin* in our kitchens and dairies? Is there nothing wrong in the markets, or the time and manner of marketing? How long will the best and sweetest butter remain so, if left in the open air, or in a warm room scented with every marketable commodity? Besides, there is much butter, so called, made by the thousands of foreigners in this state, who have no conveniences for making or keeping it, perhaps not even a milk-strainer—who, nevertheless, market it, a few pounds at a time, and receive in exchange dry-goods and groceries. Now if this is packed in firkins and sent to your city, is it wondrous strange that it should be variegated? And how is this evil to be remedied? If all the ladies who read the *Farmer* should join the hot water club, and enter at once upon the work of reform, still the evil will exist, for butter is made and sold by many who do not read the *Farmer*, or anything else. It appears to me that so long as every variety of butter is marketed with so little difference in price, the evil will not be cured, but must be endured.

It is no doubt true that there is too little attention given to the dairy by those having the care of it, for this department cannot be neglected with impunity. All intelligent persons who have had experience in this matter, must know that all dairy utensils should be kept perfectly sweet. As soon as the milk is changed, it should be skimmed, and the cream churned as soon as possible after the skimming. The butter should be thoroughly worked immediately after it is churned, and nicely packed in jar or firkin. The air must be excluded, or the surface of every layer will be injured,—to do this most effectually cover it with salt and enclose it in a clean linen or cotton cloth the size of the jar or firkin.

I cannot but believe that there is good butter made in Michigan, but the shrewd business people of our thriving cities and villages know better than to go to the city markets for it—they go directly to the dairy of the farmer. And now, Mr. Editor, allow me to express my sympathy for you in your trying circumstances; and also to hope that you may be furnished

with butter from some of the dairies of the state, which will chase away all *rancid* looks, and especially *strong* expressions.

Of course, Sir, you are at liberty to put this article in the *Farmer*, or in the fire, as you may judge best.

Very respectfully, A FARMER'S WIFE.

Pittsfield, July 1st, 1854.

[Our correspondent is right, when she refers to the carelessness of those who purchase small lots of butter, and pack it away themselves, and then forward it to market as ring-streaked, speckled. and odorous as fish exposed to the atmosphere in the dog-days. We were lately conversing with Mr. Wormley, of Marshall, on the subject, and he said that the store keepers themselves were much to blame, for the butter did not come to them in the condition in which it was sold. He said he had had a long experience in a store in a village of Pennsylvania, when he was a young man, where there was much butter bought, and packed for the Philadelphia market. It was purchased in small lots of 5, 10 and 20 lbs, and all were thrown into one tub,—sometimes enough was purchased in a single day to fill a large number of firkins. Each day it was all packed into firkins, but first enough was taken to fill a firkin, and it was thoroughly worked in clear cold water, until the water would come from it as clean as when it was put on—the water being changed several times. He had thus packed with good brine, many thousands of pounds, and forwarded it to the Philadelphia market, without ever having a keg scratched, or one sent back. Mr. Wormley did not believe in the process of dressing butter without the use of water. The milk could not be so thoroughly worked out, but there would remain some particles which would change, and make the butter rancid. He thought water was necessary to cleanse the milk from the butter, and plenty of it.]

Directions for making good Butter.

MR. EDITOR: In a late number of your paper I saw some editorial remarks complaining of the quality of butter commonly brought to the city market.—Having lived in the city one year, I know how to sympathize with you. Often when we purchased what was called the best quality of table butter, we would find it streaked with white and yellow, with curdled milk all through it, and if once put upon the table, before we could get through eating, it would be almost necessary, to use a spoon in dipping it up. But my object now is not to describe poor butter—you all know what that is to your hearts' content—it is to give you my method of making good butter.

In the first place, the dishes that the milk is set in must be perfectly sweet, and in order to have them so, after I skim my milk I rinse off all the sour milk with cold water—if hot water is used it will cook the sour milk on. I next wash off in warm water whatever may chance to adhere to the pans, after which I take water as hot as I can bear my hands in and give them a thorough washing, inside and out; then pour boiling water on each pan, let them stand a while to scald, wipe them on a clean cloth, set them out in the sun to dry, and by this time I call them clean. I have a cool place to set my milk, and when I get cream enough for a churning, I place the churn in a large vessel of cold water, and let it stand till I get through churning. The butter is taken out into a pail of cold water, and all the buttermilk rinsed out; if it is soft I let it remain in the water till it becomes hard, then work it till I can get no more milk from it; salt it and put it in a cool place for the salt to dissolve. It is then thoroughly worked again and packed down, or done up into balls for table use.

And now, Mr. Editor, I do not want you to get the impression that I think mine is the only good way; but instead of that, if you or any of your numerous correspondents know of a better way, I would like to learn it through your paper.

I remain an interested reader of your valuable *Farmer*. FLORENCE.

[Your way is certainly a very good one, and we are sure if all who make butter for market would adopt the plan of strict cleanliness, and a thorough working to separate the particles of acid buttermilk from the butter, there would be little cause for complaint, either in the city or elsewhere. There is a difference of opinion among dairy managers about washing butter, some arguing that water destroys the rich sweet flavor which is such a desirable quality in table butter; others that it only aids in separating from it the rancid particles which, if retained, very soon gives it a flavor which is anything but agreeable. As the main object is to have the butter sweet, we recommend the plan that will most effectually accomplish this end.]

Culture of Marjoram.

Sweet Marjoram is a native of the South of Europe. It has a pleasant odor, and a warm, aromatic, bitterish taste. It is used for seasoning soups, and other matters of cookery, and considered a wholesome ingredient, and beneficial in nervous complaints. There are two varieties, the Sweet and the Pot Marjoram; the former an annual, and the latter an herbaceous plant, or a plant that lasts from year to year.

CULTURE.—Marjoram seed is of the very smallest description, and has to be sown early in April. On ground finely prepared, make a mark along the line with the point of a stick, merely to show where the seed is to be dropped, which do very thinly and evenly, then cover up with the back of the rake. The rows should be ten inches apart. As soon as the plants appear, thin them out to two inches apart.—When the plants offer to bloom, cut the stems and dry them in the shade. When dry, tie them in paper bags and hang them up in a dry room for use. Let a few plants ripen for seed.

Pot Marjoram, or *Winter Marjoram*, is propagated by dividing the roots early in spring and planting it in beds. Cut it when in full bloom; dry in the shade; wrap it up, and preserve it for winter use.—*Buist's Kitchen Gardner.*

Book Notices.

FARM IMPLEMENTS, *and the principles of their construction and use; an elementary and familiar treatise on Mechanics, and on Natural Philosophy generally, as applied to the ordinary practices of Agriculture.* With 200 illustrations. By JOHN J. THOMAS. Published by Harper & Brothers, New York.

A copy of this invaluable work, the first edition of which the late A. J. Downing expressed a wish to see bound and hung up in every work shop, tool shop and farmer's book-shelf in the country, has reached us with the author's respects. We have received it at too late a date to give it as full a notice as we mean it shall have at our hands. As a useful practical compendium of the principles of the mechanical operations which are going on under the farmer's eyes every day, in every kind of work, there is no work extant which is its equal. The author himself has brought the experience of a life devoted to agricultural pursuits and practice, to bear in the illustration of the science of mechanics, in all their manifold applications on the work of the farmer, and has thus made a book at once useful by the practical science which it teaches and elucidates. The mechanical action involved in the working of every implement and machine used on the farm, is explained and illustrated so that the reader is equally surprised and delighted to find his every day work brought before his eyes, and analysed and reduced by the ingenuity of the author to the rules of science. Nor is it the mere implements, but the making of roads, the distribution of water, action of heat and air, the construction of chimneys, and the art of ventilation, with many other subjects, are treated in a method that is as instructive to the man and the farmer, as the first rudiments are to the boy seeking for knowledge. The work is handsomely printed, and we most heartily commend it as a text book for schools, and for school libraries.

FRUITS AND FARINACEA, THE PROPER FOOD OF MAN: PARTS I. & II.—*By John Smith, with notes and illustrations by R. T. Trall, M. D.* Published by Fowlers & Wells, New York.

This is a re-publication of an English work, which is "an attempt to prove, from history, anatomy, physiology, and chemistry, that the original, natural and best diet for man, is derived from the vegetable kingdom." The vegetarian question is one which is every day gaining in importance, especially in large cities. This work is one of the ablest treatises that has yet appeared on this question, and forms a compendium of all the arguments which can be adduced in favor of a purely vegetable diet. It is neatly printed, and published in parts, and when published entire and bound will prove a valuable book of reference.

THE PATENT REPORT FOR 1853, PART I., MECHANICS.—We are indebted to the Hon. Lewis Cass and to the Hon. David Stuart, for copies of this public document, which contains much valuable information relative to mechanical inventions.

BLACKWOOD FOR JULY.—This excellent reprint of Leonard, Scott & Co., New York, has been received. The volume commenced with the last number. All who can afford it should take Blackwood, when they can have it on Scott's cheap terms, either with or without one or all of the four leading British Reviews, which he re-publishes.

THE COUNTRY GENTLEMAN.—This very ably conducted weekly "journal for the farm, the garden, and the fireside," commences a new volume with the first of July. For real value as a practical paper containing sound advice for the practice of farming and gardening, we know of none superior to it. It is published by Luther Tucker of Albany, N. Y., at the rate of $2 per annum.

THE HORTICULTURIST AND JOURNAL OF RURAL ART AND RURAL TASTE.—The next semi-yearly volume of the *Horticulturist* commences with the July number. Judging by the efforts of the editor and publishers to render their work an indispensable companion to the amateur in the art of improving and rendering beautiful those comely residences, which are springing up everywhere throughout the land, the past volume has given every evidence that they have achieved success in their enterprise. The observations on fruits, the planting of orchards, the selection of varieties, the beautiful illustrations relative to ornamental and landscape gardening have made the *Horticulturist* a standard work, which will repay its subscribers. There are two editions of the *Horticulturist*, one at $4 per annum, in which the plates of fruits and flowers are colored after nature; and the other at $2 per annum, in which the plates are plain. The *Horticulturist* is edited by P. Barry and published by James Vick, of Rochester, N. Y.

☞The *Twentieth Annual Report* of the managers of the American Female Guardian Society & Home for the Friendless in New York has been received. The report shows that the Society is doing a great deal of good, and is deserving of much encouragement. The good and noble women who are engaged in carrying out the designs of this society are indeed imbued with a true christian charity, and their success should stimulate a spirit of emulation in other cities.

THE MICHIGAN JOURNAL OF EDUCATION AND TEACHERS, MAGAZINE.—Edited by J. M. Gregory, Prof. E. O. Haven, and Prof. A. S. Welsh.—The July number of the Journal of Education has been received, and we find that its leading article is the commencement of a series on "Mode of Education," from the pen of Professor Haven, of Ann Arbor. This journal is calculated to do great and good service to the interests of education in Michigan, and should meet with an encouraging support from teachers and parents.

THE WOOL GROWER AND STOCK REGISTER.—This valuable monthly journal, published by D. D. Moore, and edited by T. C. Peters, commences a new volume with July, and has recently been enlarged and improved. It is, as its name imports, devoted to the wool, sheep and live stock interests.

POLAND OATS.—We have only room to acknowledge the receipt of Mr. Kingsley's box of Poland Oats, and his letter, and promise that they shall be attended to in our next number.

Answer to an Enquiry.

EDITOR MICHIGAN FARMER: Mr. B. C. Benson, of Moscow, wishes to know whether the young pear trees that he has set out can be made to grow into the limbs of his old tree, and thus become supports. If the connection is properly made, there will be no difficulty in the matter. A neighbor of mine has a pear tree, the limbs of which are thus supported, the young trees and the old one all growing finely together. A few years since, some of our apple trees were girdled by mice, just at the surface of the ground.—Young trees were set out about a foot from the old trees, the tops of the young trees inserted into the body of the old ones about two feet above the ground, and the effect in almost every case was to preserve the trees.

Respectfully,

J. S. TIBBITS.

Plymouth, uly, '54.

MICHIGAN FARMER.

ROBERT F. JOHNSTONE, EDITOR.

DETROIT, AUGUST, 1854.

LIST OF STATE FAIRS FOR 1854.

Ohio	Newark	September	19—22
Michigan	Detroit	September	26—29
Illinois	Springfield	September	12—15
Indiana	Madison	October	4— 6
Iowa	Fairfield	October	25
Pennsylvania	Philadelphia	September	27—29
New York	New York City	October	3— 6
Vermont	Brattlebro'	September	12—14
New Hampshire		October	3— 6
Georgia, (So. Central)	Augusta	October	23—28
Connecticut	New Haven	October	10—13
Missouri		October	3— 6
Wisconsin	Milwaukie	October	4— 7
National Cattle Show	Springfield, Ohio	October	25—27
Kentucky	Lexington	September	12—16
North Carolina	Raleigh	October	17—20

The Late Rev. Charles Fox.

The past week has been signalized by the sudden and unexpected decease of the Rev. Charles Fox, a gentleman who was identified in an eminent degree with the progress of agricultural education in this state.

Mr. Fox was a native of England, having been born at Durham, in November, 1815, and was educated at the Rugby school, of which the celebrated historian, Dr. Arnold was the Principal for so many years. In 1833 he came to New York, and passed some two or three years as a clerk for his brother in a mercantile house, from whence he went to Connecticut, to study for the church. After passing through a course of study, he came to Michigan in 1839, and took charge of the Episcopal church at Jackson, and was ordained and admitted to orders by the present Bishop of the Diocese, the Rev. Dr. McCroskey, on the first of December, 1840. At Jackson he suffered from ill health, and left it in 1841, taking up his residence at Columbus, Ohio, where he remained a year, and then returned to Michigan, settling at Truago, (now Trenton) as a missionary. In 1843, he purchased his farm on Grosse Isle, and married a daughter of Col. Rucker, of that place, in June of that year. Here he resided, and entered largely into the improvement of his farm, which consisted of 400 acres of very valuable land, officiating as a clergyman at Trenton and Grosse Isle, until the fall of 1853, when he moved to Ann Arbor for the winter, for the purpose of delivering a course of lectures upon agricultural science at the University. At the close of his lectures in the spring, he returned to his home in Grosse Isle. In June last he had the misfortune to have his house burned down, and he removed with his family to Detroit. Here he suffered, just previous to his own death, the loss of his son, a bright, intelligent boy. The agitation and grief which this loss occasioned a man of his nervous temperament, undoubtedly had the effect of rendering his system peculiarly liable to the attacks of the prevailing epidemic, and on the morning of Sunday the 23d, he was prostrated by it on the bed of sickness, from whence he never arose. He died at 4 o'clock on the morning of July 24th, after undergoing much severe suffering, surrounded by his family and many friends, who had done all they could to relieve him. His death was that of a Christian and a man prepared to meet his God, forgiving all, and resigned to that dispensation which called him from the scenes of his earthly labors to pass through the narrow and silent valley of the grave, to those regions where the weary are at rest.

Our own knowledge of the deceased was very slight, never having had much opportunity to form more than a mere casual acquaintance with him, but he left the impression upon us of a man of generous and warm feelings, impulsive, but ever desiring to be right. From the time that he took up the cause of agricultural education, he devoted himself, his fortune, and his abilities to it, with a total disregard to pecuniary or selfish motives. His generous conduct in delivering a course of lectures at the University without remuneration, although it involved him in a heavy outlay for expensive works, for which he had to send to Europe, and even a change of residence, was characteristic of the an. So in other matters connected with agriculture, he prosecuted them without regard to their expense, which an ample fortune enabled him to meet. His text book on Agriculture, we have already in this journal called attention to, as a work giving evidence of his great industry and research, and as a very useful work even to scientific men, as containing in a small compass the results of a great deal of scientific research, not readily to be acquired without much labor and expense. Cut down in the full vigor of life, and in the midst of an honorable career which would have placed him among the most useful benefactors of the state, we are sure that his loss will be deeply felt throughout the peninsular state, as well as in other states where he was known. The cause of agriculture and of education in Michigan has suffered no greater loss than that which it is called upon to mourn in the death of the Rev. Charles Fox, of Grosse Isle.

The following preamble and resolutions were adopted at a meeting of the Faculty of the University, convened on the occasion of the death of Prof. Fox:

Whereas, We have just received the painful intelligence of the death of the Rev. Prof. Chas. Fox; and *whereas*, we deem it due to his memory, to the respect we owe his family, and to the emotions of our own hearts, to give utterance to the feelings which this event has awakened, Therefore:

Resolved, That our warmest sympathies be tendered to his bereaved consort and surviving children, with the hope tho t the example of one who lived nobly and died at the post of duty, may alleviate their grief and strengthen them in their affliction.

Resolved, That Prof. Chas. Fox had greatly endeared himself to us by his equanimity of temper and eminent social excellencies, by his accomplished education and varied acquirements, and by his zeal in the cultivation of science, by his ardent and untiring efforts to promote the

highest good of society, and by his liberal and controlling Christian principles and character.

Resolved, That science has lost in the death of Prof. Fox, one of her most ardent, industrious and successful votaries,—the University of Michigan, one of her most efficient and promising professors, while the Agricultural interests of the University and of the State have been deprived of a friend and advocate and laborer whose various and extensive acquirements in natural science, united to his thorough practical experience, had placed him so prominently in the front rank of agricultural writers, that we know not where to look to fill the place which his untimely death has vacated.

Resolved, That a copy of these resolutions be transmitted to the family of the deceased.

H. P. TAPPAN,
Pres. of the Faculty.

A. WINCHELL, *Sec'y.*
UNIVERSITY OF MICHIGAN, July 25th, 1854.

The Michigan Agricultural State Society, 1854.

(OFFICIAL NOTICE.)

The Michigan State Agricultural Society will hold its sixth Annual Fair at Detroit, on the Jones and Cass farms, Tuesday, Wednesday, Thursday and Friday, September 26, 27, 28 and 29, 1854.

Premiums to be awarded, $4,500. The executive committee will meet at the Society's rooms, on Jefferson Avenue, two doors east of Farmer's and Mechanic's Bank, on Monday evening, September 25th, at 7 o'clock.

In order to save time, exhibitors are requested to enter and arrange their articles, as far as possible, on Monday, the 25th, and to have all stock and articles entered, and upon the ground by 6 P. M. of the 26th, so that all may be in readiness for examination by the Judges on Wednesday, the 27th, at 9 o'clock, A. M.

ORDER OF PROCEEDINGS.

On Tuesday the 26th, at 3 o'clock, P. M., the executive committee will hold a meeting at the business office, on the show ground, for the purpose of filling any vacancies that may occur in the viewing committees.

All members of viewing committees who may be on the ground, will be particular to attend this meeting.

The viewing committees will receive their Committee Books from the Secretary, at his office on the show ground at 10 o'clock A. M., of Wednesday, 27th, and commence their examinations immediately thereafter.

PLOWING MATCH.

The plowing match will take place at 10 o'clock A. M., 28th.

ANNUAL ADDRESS.

The annual address will be delivered by ——— on the show ground, at 2 o'clock P. M. of the 28th.

REPORTS.

The reports of the judges will be read on Friday at 9 o'clock A. M. The judges will be expected to give the reasons for their decisions, embracing the valuable and superior qualities of the animals or articles to which premiums are awarded.

PREMIUMS.

Premiums will be forwarded to the persons to whom they are awarded at as early a day after the fair as practicable.

ANNUAL MEETING.

The Annual Meeting of the Society, for the choice of officers, and for the transaction of such other business as may come before the meeting, will take place on the show ground at 11 o'clock A. M. of the 29th, or immediately after the reading of the reports of committees.

SALE OF STOCK AND IMPLEMENTS.

A public sale of Stock and Implements will commence at 12 o'clock M. of the 29th.

The several Railroads and Plankroads in this State —also the Great Western Railroad, will pass passengers and freight over their roads at the usual reduced rates.

Arrangements have been made with the river boats to transport passengers and freight at reduced rates.

The steamers Arrow and Dart will connect with the Michigan Southern Railroad at Monroe, and take passengers and freight as above.

J. C. HOMLES, *Secretary.*
Office of Mich. State Ag. Society, Detroit.

POLAND OATS AND FLOUR CORN.—Mr. D. D. Tooker, of Napoleon, writes to us and wishes us to say that any of those who received Poland Oats, or the seeds of Flour Corn from him, (and there were several hundred who made application) who did not sow their seed, or with whom the seed may have proved unsuccessful, that he is willing to renew the proposal made in the April number of the *Farmer*. He says he has taken great pains to ensure clean and good seed, if the season should prove favorable for the growth and ripening of his crop.

☞ We received the letter from California, which we publish in this number, from an old subscriber, formerly a resident of St. Joseph county, who writes that he longs to see the face of the *Michigan Farmer* again, almost as much as he does to hear the rushing of the waters of the swift St. Joe.

☞ We learn that Mr. Benjamin Lloyd, formerly of Hickory Grove, Jackson County, has moved to Millburg, in Berrien County, where he is about to establish a Nursery and Horticultural establishment, to be called the Pine Grove Nursery.

TRIAL OF REAPERS AND MOWERS.—There was a trial of Reapers and Mowing Machines, at Louisville, Kentucky, on the 21st of last June, got up under the charge of the South-western Agricultural and Mechanical Society. The trial excited a good deal of interest in the vicinity. The following machines were entered for competition :

1. Seymour & Morgan's New York Reaper, entered by Warder, Brokaw & Child.
2. Manny's combined Reaper and Mower, entered by J. H. Manny & Co.
3. Atkins' Automaton, or self-raking Reaper and Mower, entered by J. S. Wright & Co.
4. Forbush's Combined Reaper and Mower, entered by New York Reaping and Mowing Machine Co.

5. Ketchum's Mowing Machine, entered by Warder, Brokaw & Child.
6. Hussey's Mowing Machine, entered by Minturn, Allen & Co.
7. Manny's Mowing Machine, entered by J. H. Manny & Co.

Lots sixty poles in length by six furlongs wide and each embracing an area of two and a quarter acres, were laid off, and the machines drawn each by two horses, manned by a driver, and a thrower-off of the cut grain, were set at work. The contest for some time was very spirited, but decisive in every instance as to the merits of the respective machines.

The following were the awards:

For the best Reaper—The New York Reaper entered by Warder, Brokaw & Child.

For best Mowing Machine—Ketchum's Mower entered by Warder, Brokaw & Child, of Springfield, Ohio.

For best combination of Reaper and Mower—Manny's Combined Patent, which has been advertised in the *Farmer* for the past three months.

The Markets.

In regard to the prices of the several articles, we have few or no alterations to make. Flour made from new wheat, has been coming into Market in small lots; and as the stock is very light here at present, the price is kept up to $7,75 a nd $8. No new wheat has been offered for sale here, but buyers have expressed themselves willing to give $1,37½ cents if delivered immediately. From the accounts that reach us, as well as from conversation with those who have lately traversed England, and also from the latest agricultural journals which have come to hand, there is little doubt but Great Britain has one of the greatest grain crops, both winter and spring, that has ever been produced. The critical period, which is from the first of July to the last week of that month, we are inclined to think has been passed safely. In two weeks more the harvesters will be in the field in the south of England. The certainty of a good crop is causing a decline in the rates reported by every steamer, and American flour which was reported a month ago as worth 39s to 40s per barrel, is now quoted at 28s and 30s. The accounts from the Continent are all good. The crops in the Prussian provinces are reported good. The south of France and the countries bordering on the Mediterranean, have already harvested an abundant crop though none of it has yet had time to get to market. Taking the reports from our own states, and with but few exceptions, the crops are better and larger than they were last year; both corn and oats are doing much better.—With these facts staring us in the face, we are inclined to come to the conclusion that war or no war in the east of Europe, the prices of breadstuffs must decline materially between this time and the 1st of October, but to what extent, we defy any man to predict with accuracy.

P. S. The Canada, from Liverpool, is just in as we go to press, and her reports show a decline of 25 cents per bushel in wheat, and one dollar per barrel in flour. This will affect our opening prices materially, but we cannot say how much at present.

As for wool, we cannot report any improvement in it.—In fact, if it only keeps where it is, our friends ought to be to be thankful. The foreign market reports show that it is lower, and with poorer prospects than even with us.

The Swamp Lands.

We would call attention to the advertisement of the sale of Swamp Lands, by the Hon. Porter Kibbee, State Land Commissioner, and to the several postponements of these sales which the same officer has ordered.

☞ During the past month we paid a brief visit to Calhoun county, calling on a few friends in Marshall, Ceresco, and Marengo, by whom we were hospitably and cordially received. We visited Mr. S. P. Wormley's place, Mr. Barber's farm, Mr. Pearl's and Mr. Hosmer's, and were most highly pleased with a drive from Marshall to Marengo, in company with Mr. Wormley and his father, and Mr. Tillotson, of Marshall, during which we passed the very beautiful recently erected residences of Mr. Church, Mr, Chisholm, Col. Maynard, and other agriculturists of that section; on whom we regret we had not time to call, on this visit, but will at a future one. We visited the farms of Mr. George Dryer, and of Mr. S. G. Pattison, and of his son Albert Pattison, and will have something to say in our next number of what we noticed in this fertile and most lovely section of Michigan, which is rich in all the elements that should and does make Calhoun one of the most prosperous and thriving counties in the State.

☞ We have on hand for the next number, valuable and instructive communications from Professor Dadd on the feeding of pigs, A. B. Markham on mortar and gravel houses, J. D. Patterson on Saxon Sheep, and sundry others which were received at too late a date for this number, which we think is already pretty well filled. Our friends must try and send their communications as early in the month as possible, as we mean to try to be with them all by the first week, and if possible by the first day of every month hereafter. We have had a hard struggle to "catch up" this month, owing to the effects of sickness, cholera, hot weather, and visiting, on our hands. But the season for the epidemics is almost over, and we do not care to see or hear anything of them again till next summer.

Shepherd's Dogs, Shanghæ Fowls and Suffolk Pigs.—During a visit to Marengo, we called upon George W. Dryer, at his beautiful farm a short distance from that village, and he called our attention to a fine litter of pure bred sheperd's dogs, which his slut had brought him, and which it will be seen he offers for sale. Mr. Dryer also had a very fine litter of Suffolk Pigs, that are worth the attention of those who are choice about what kind of pork they raise. He had also on hand, Brahma Pootra, Shanghæ, and Cochin China fowls, which he will warrant pure blooded. Mr. Dryer has all the conveniences for raising hese kinds of stock, and he takes great pains with them.

The Livingston County Agricultural Society.—The Agricultural Society of Livingston county have had the rules, and regulations, and the list of premiums adopted by them, printed in a neat pamphlet form, a copy of which has been received. Their annual fair, which is the second one of that Society, is to be held at Howell, on Tuesday Wednesday and Thursday, October 3, 4, and 5.

The officers are, President, Ira Jennings; Secretary, N. G. Isbell; and Treasurer, Ely Barnard; Directors, John R. Goodrich, Elijah F. Burt, Austin Wakeman, James M Murray, Pierpont L. Smith.

☞ We take a very sensible communication relative to "Pure Water for Cattle," from the Michigan Argus, which is applicable to other localities besides the county of Washtenaw,

AT PENFIELD'S STORE.

EMERY'S improved patent Railroad horse-power Thrasher and Separator. Price, complete, $175.
Emery's saw mills, for power. Price, $40.
Straw and stalk cutters, for power. Price, $30.
Straw and stalk cutters. Price from $8 to $20.
Ox yokes and bows complete.
Patent galvanized iron pump tubes.
Iron ank wood curbs, &c. [aug-4t]

SALE OF SWAMP LANDS.

STATE LAND OFFICE,
LANSING, Mich, June 5, 1854.

PUBLIC NOTICE is hereby given, that the Swamp Lands granted to the State of Michigan, by act of Congress, 28th of September, 1850, lying in the counties of Allegan, Barry, Eaton, Lapeer, Genesee, Shiawassee, Clinton, Ionia, Kent, Ottawa, Saginaw, Oceana, Newago, Mecosta, Isabella, Gratiot, Midland, Huron, Tuscola, and the Townships in Ingham county, west of the meridian, will be offered for sale at public auction, at the times and places hereinafter specified, viz:

The Lands in the counties of Ingham, Eaton, Shiawassee, Clinton, and Gratiot, at this Office, on Tuesday, the 18th day of July next, at 9 o'clock A. M., of that day;

In the county of Barry, at the village of Hastings, on Tuesday, the 25th day of July next, at 9 o'clock, A. M.;

In the county of Allegan, at the village of Allegan, on Thursday, the 27th day of July next, at 9 o'clock A. M.:

In the counties of Ottawa and Oceana, at Grand Haven, in Ottawa county, on Monday, the 31st day of July next, at 9 o'clock A. M.

In the counties of Kent, Newaygo, and Mecosta, at the city of Grand Rapids, in Kent county, on Thursday, the 3d day of August, at 9 o'clock, A. M.;

In the counties of Ionia, Isabella, and Montcalm, at the village of Ionia, in Ionia county, on Monday, the 7th day of August next, at 9 o'clock A. M.;

In the counties of Huron and Lapeer, at the village of Lapeer, on Tuesday, the 15th day of August next, at 9 o'clock, A. M.;

In the county of Genesee, at the village of Flint, on Friday, the 18th day of August next, at 9 o'clock A. M.;

In the counties of Saginaw, Midland and Tuscola, at Saginaw city, on Monday, the 21st day of August next, at 9 o'clock A. M.

All persons claiming the right to purchase any of said lands, under the provisions of Act No 76, of the Legislature of Michigan, approved February 14, 1853, are requested to file satisfactory evidence of such right, in this Office, prior to the day of sale.

None of the lands enuring to the State of Michigan, under the act above referred to, of 28th September, 1850, which have been erroneously sold by the General Government, will be offered at said sales.

PORTER KIBBEE, Commissioner.

Postponement.

The above sales of Swamp Lands are postponed as follows, viz.: The sale at Grand Haven, to Tuesday, the 3d day of October next, at 9 o'clock A. M.

The sale at Grand Rapids, to Friday, the 6th day of October, at 9 o'clock A. M.

The sale at Ionia, to Wednesday, the 11th day of October, at 9 o'clock A. M.

The sale at Lapeer, to Tuesday, the 17th day of October, at 9 o'clock A. M.

The sale at Flint, to Saturday, the 21st day of October, at nine o'clock A. M.

The sale at Saginaw, to Tuesday, the 24th day of October, at 9 o'clock A. M.

The sales at Lansing, Hastings, and Allegan, will take place as advertised.

PORTER KIBBEE, Commissioner.

Lansing, July 10, 1854.

Further Postponement.

STATE LAND OFFICE,
LANSING, Mich., July 18, 1854.

The sales of Swamp Lands advertised to take place at Lansing, this day, at Hastings, Barry county, on Tuesday the 25th inst., and at Allegan, on Thursday, the 27th inst., are hereby postponed, as follows, viz:

The sale at Lansing, to Tuesday, the 12th day of September next, at 9 o'clock, A. M., of that day.

The sale at Hastings, to Tuesday, the 19th day of September next, at 9 o'clock A. M.

The sale at Allegan, to Friday, the 22d day of September next, at 9 o'clock A. M.

PORTER KIBBEE, Commissioner.

CHAS. ROSS' IMPROVED PATENT CONICAL BURR-STONE MILLS,

To which have been awarded Fifty-One first Premiums by different Societies.

THESE mills are well adapted for grinding wheat, rye, buckwheat, corn, feed, salt, drugs, coffee, spices, paints, verdigris, white lead, water-colors, charcoal, &c., and may be propelled by water, steam, or horse power, and will do their work with great rapidity and perfection, and may be put up and kept in order by almost any person. It is a perfect grist-mill in miniature, well adapted to the wants of every farmer and painter, and is undoubtedly the cheapest and best mill ever offered to the public. These mills are not made of iron or steel, which soon becomes dull by use, and then cannot be sharpened again, but of the best French burr-stone, which is but little affected by use; and when it does become dull, it can be easily sharpened by the farmer himself.

No. 1, hand-mill, or one-horse-power mill, horizontal, 11 inches, 130 lbs., $75; No. 2, horse-power mill, (for farmers and planters,) horizontal, 13 inches, 230 lbs., $100; No. 3, steam or water-power, horizontal, 15 inches, 380 lbs., $140; No. 4, steam for grist-mills, horizontal, 17 inches, 450 lbs., $170; No. 5, steam for merchant-mills, vertical, 24 inches, 900 lbs., $300.

For sale at Chester's store, on the dock, Detroit, by WALTER CHESTER, who will give all necessary information relative to these mills.

[aug-6m] JOSEPH SEDGEBEER, Agent.

NEW-YORK ADVERTISEMENTS.

From Visscher & Scholl's Gen'l Advertising House.

Appleton's Building 346 *and* 348 *Broadway.*

AMERICAN ARTISTS UNION!

The **American Artists' Union**, would respectfully announce to the citizens of the United States and the Canadas, that for the purpose of cultivating a taste for the fine arts throughout the country, and with a view of enabling every family to become possessed of a gallery of Engravings,

BY THE FIRST ARTISTS OF THE AGE,

They have determined, in order to create an extensive sale for their Engravings, and thus not only give employment to a large number of artists and others, but inspire among our countrymen a taste for works of art, to present to the purchasers of their engravings, when 250,000 of them are sold,

250,000 Gifts, of the actual cost of $150,000.

Each purchaser of a One Dollar Engraving, therefore, receives not only an Engraving richly worth the money, but also a ticket which entitles him to one of the Gifts when they are distributed.

For **Five Dollars**, a highly finished Engraving, beautifully PAINTED IN OIL, and FIVE GIFT TICKETS, will be sent; or FIVE DOLLARS' worth of splendid Engravings can be selected from the Catalogue.

A copy of the catalogue, together with a specimen of one of the Engravings, can be seen at the office of this paper.

For each dollar sent, an Engraving actually worth that sum, and a Gift Ticket, will immediately be forwarded.

AGENTS.

The Committee believing that the success of this GREAT NATIONAL UNDERTAKING will be materially promoted by the energy and enterprise of intelligent and persevering Agents have resolved to treat with such on the most liberal terms.

Any person wishing to become an Agent, by sending (post paid,) $1, *will receive by return of Mail*, a One Dollar Engraving, a "GIFT TICKET," a Prospectus, a catalogue and all other necessary information.

On the final completion of the sale; the Gifts will be placed in the hands of a COMMITTEE of the PURCHASERS to be DISTRIBUTED, due notice of which will be given throughout the United States and the Canadas.

LIST OF GIFTS:

100 Marble busts of Washington at $100			$10,000
100 " " Clay,	100		10,000
100 " " Webster,	100		10,000
100 " " Calhoun,	100		10,000
50 elegant Oil paintings, in splendid gilt frames size 3x4 feet each,	each $100		5,000
100 elegant Oil Paintings, 2x3 feet, each $50			5,000
500 steel plate engravings, brilliantly colored in oil, with rich gilt frames 24x30 inches,	each $10		5,000
10,000 Steel plate Engravings, colored in oil, of the *Washington Monument*, 20x27,	each $4		40,000
237,000 steel plate engravings, from 100 different plates, in possession of and owned by the Artists' Union, of the market value of 50c to $1 each,			41,000
1 first-class dwelling, in 31st street N. Y. city,			$12,000
22 building lots in 10th and 101st streets N. Y. city, each 25x100 ft., each $1000,			22,000
100 Villa sites containing each 10,000 sq. ft. in the suburbs of N. Y. city, and commanding a magnificent view of the Hudson river and L. I. Sound, each $500,			50,000
20 perpetual loans of cash each without interest or security,		$250 each,	$5,000
50 " " " " "		100 "	5,000
100 " " " " "		50 "	5,000
250 " " " " "		20 "	5,000
2000 " " " " "		5 "	10,000

References in regard to the Real Estate, F. J. VISSCHER & Co., Real Estate Brokers, New York. Orders, (post paid,) with money enclosed, to be addressed

J. W. HOLBROOKE, Sec'y,
505 Broadway, New York.

CHICKENS FOR SALE.

THE subscriber has for sale a large number of first class chickens, superior even to any he has ever bred heretofore, though always having taken premiums wherever exhibited in different states.—The present stock are bred from recent choice selections of the first importations of the following varieties, viz: Brahma Pootras from a late importation of mottled plumage, which attracted great admiration at the late poultry exhibition in New York city. They are of great size, perfect form, and beautiful plumage. Shanghais of Forbes, Periz, and Carrington importations. Black Cochin China of a green metalic lustre—*great layers*; red Cochin Chinas—very fine; gray Chittagongs—very large; Hong Kongs from the premium coop at Boston last year; gray Dorkings imported by subscriber last year from Dorking, England; Sumatra Pheasant games from Dost. Bennett's stock, and Sebright Bantams, all of which are bred with the utmost care as to purity.

Persons forwarding orders with the money may rely on being promptly attended to; carefully cooped and delivered at M. C. R. R. without additional charge; also, fresh eggs carefully packed and delivered at depot for $3 ₱ doz. Price of Brahma Pootras, $3 ₱ pair; all other varieties of Asiatics, $6; well grown Dorkings, $4.

M. FREEMAN.

Schoolcraft, Mich., May, 1254. [aug-4t]

SHORT HORNS FOR SALE.

TWO thorough bred Yearling Bulls, viz: **TUSCARORA**—Red and White, calved 15th May, 1853, got by American Comet, out of Bellflower. **Price $150.**

OSCEOLA—Red and white, calved 27th June, 1853, got by American Comet out of Willey. **Price $125.**

The Sire and Dams of these Bulls were bred by Mr. George Vail, of Troy, N. Y., and are descended directly from the celebrated Stock of the late Thomas Bates, Esq., of Kirkleavington, England.

Breeders desirous of improving their stock will do well to examine these animals, which are

Offered at a Low Price,

and are of undoubted purity of blood.

FULL PEDIGREES

For several generations, furnished if desired. Apply to P. C. TURNER, Foreman at Belknay's Farm.

June-3t. Henrietta, Jackson Co., Mich.

PURE BRED STOCK.

At private sale at Mount Fordham, Westchester Co., N. Y., eleven miles from the City Hall, N. Y., by the Harlem Railroad Cars.

HAVING met with more success than I anticipated the past year with the Catalogue of male animals at private sale, is the reason for my offering this lot of animals, and *MY JUNE SALE BY AUCTION, WILL NOT TAKE PLACE.* A full descriptive Catalogue with prices attached, will be published on the 15th of April, and I intend to be at home myself, to see any who may call. I will sell at private sale, about 18 Short Horns, 6 of which are young Bulls and Bull Calves. The Cows and Heifers old enough will be in calf to the celebrated imported Bull, "BALCO," (9918) or imported "ROMEO," winner of the first prize at Saratoga, in 1853, and also at the American Institute the same year.

The young Bulls, and Bull Calves are some of them from imported Cows, and sired in England, and others are sired by the imported Marquis of Carrabas, (11789) winner of the first prize at Saratoga the past year, as a two year old;

Also about ten Devons, consisting of a yearling Bull, sired by MAJOR, and 5 Bull Calves, sired by my imported first prize Bull FRANK QUARTLY, and several of them from imported Cows. The Cows and Heifers old enough will be in Calf to FRANK QUARTLY. Also 6 or 8 Suffolk Sows, and several young Suffolk and Essex boars. Also 2 Southdown Rams, imported direct from Jonas Webb, and 6 yearling Rams, all bred by me, from stock on both sides imported from Jonas Webb. Catalogues will be forwarded by mail if desired.

All animals delivered on Shipboard or Rail car in the city of New York free of expense to the purchaser. The Devons are at my Herdsdale farm, 12 miles north, to which place I will take persons to and from.

My Friend, Mr. N. J. Becar, who is interested in several of my importations, will also sell ten head of Short Horns, consisting of 4 young Bulls and 5 or 6 females. His young Bulls are also several of them from imported Cows, and sired by the *Lord of Eryholmve*, (12205) and the celebrated first prize imported Bull *Romeo*. Mr. Becar's Cows and Heifers are in calf to the imported Bull *Marquis of Carrabas*, (11789.) Mr. Becar can be seen at his store, 187 Broadway New York, at which place he will make arrangements to go to his Farm at Smithtown Long Island. His animals will be entered in the same Catalogue with mine, which can be obtained by addressing him at his store or me at Mount Fordham. His animals will be delivered in the same manner as mine. Our importations have been in almost all cases made at the same time and are of equal merit, excepting that I have more in number. L. G. MORRIS.

Terms, Cash on delivery.

March 16th, 1854.

J. R. SMITH,

Maker of Carhart's Patent Melodeons.

ADRIAN, MICH.

I **HEREBY CERTIFY** that I have seen and examined the melodeons constructed by J. Rufus Smith, of Adrian, and that the tone is full and even, while the touch is easy and prompt. The finish of these Instruments is decidedly superior. I respectfully recommend these melodeons to the public. GEO. R. POULTON,

Prof. of Music, and Member of the American Musical Institute, N. Y.

Directly

NEW YORK CHEAP JEWELRY STORE.

No. 55 Woodward Avenue, Detroit.

L. P. DURKEE & CO., Successors to H. B. Marsh, wholesale and retail dealers in

Watches, Clocks, Jewelry & Fancy Goods,

have just received and opened, a splendid assortment of Gold and Silver Watches, Silver Ware, Jewelry, Clocks and Fancy Goods, which will be sold cheaper than the cheapest.

☞ Watches and Clocks repaired and warranted. (june'54-1y

D. O. & W. S. PENFIELD,

Agricultural Warehouse and Seed Store.

No. 125 Woodward Avenue,

DETROIT, MICH

SEYMOUR & MORGAN'S New York Reaper, with self-raking attachment: Price $140 and transportation; also Ketchum's Mowers; Price $100 and transportation.

may D. O. & W. S. PENFIELD.

TOLEDO NURSERY.

THE subscribers, having by recent importations, and by their own cultivation greatly increased their stock, now offer for sale the largest and most complete assortment of

Fruit, and Ornamental Trees, and Shrubs,

ever offered at the West.

The time is past when the West, with its superior capacities for the growth of all the choicest fruits, is compelled to suffer delays, and heavy expenses of transportation, as well as injury to trees, by sending to other States for them.

With our establishment placed upon the most liberal and extensive basis, with the superior facilities afforded to our location by Railroad, Lake and Canal Transportation, to all parts of the country, we feel confident that we shall be prepared to do justice to any order We have ready for sale

100,000 Apple Trees,	Standard	and	Dwarf,	embracing	115	varieties.
15,000 Pear	"	"	"	"	85	"
10,000 Cherry	"	"	"	"	75	"
5,000 Peach	"	of the choicest variety.				
3,000 Plum	"	including the new McLaughlin.				

A large and fine assortment of Apricots, Nectarines, Quinces, Raspberries, Strawberries, Gooseberries and Currants.

THE ORNAMENTAL DEPARTMENT

embraces the most complete assortment west of New York. We have spared no cost or expense to obtain everyshing new and valuable.

Deciduous and evergreen Trees and Shrubs, Hybrid, Perpetual, Moss, Bourbon, Climbing, Tea, Bengal, House and Garden Roses,—Vines and Creepers, Honeysuckles, Pæonies, Dahlias, Altheas,—Plants for house culture, &c., now in fine condition, for sale.

We shall always be happy to see our friends at our grounds, and show them our stock. To those who may desire to purchase we shall always offer the best of stock in large or small quantities, as low as any responsible establishment in the United States.

We can furnish gratis, those who desire our catalogues; No. 1, descriptive of fruits, No. 2, descriptive of ornamental Trees, Shrubs, &c and No. 3, combining Nos. 1 and 2. Applications by mail should be post paid and enclose, to prepay postage on catalogues, for Nos. 1 & 2 one, and for No. 3 two postage stamps.

All orders will receive prompt and careful attention, if addressed to MADDOCKL, PERIGO & PRENTICE,

Toledo, Oct. 15th, 1853. nov!

The Horse, Noblest of Animals.

First edition sold in one Week.

OF

THE MODERN HORSE DOCTOR.

BY

DR. GEORGE H. DADD.

The celebrated English Veterinary Surgeon, now residing in Boston, Mass., and confessedly at the head of his profession in this country.

Containing practical observations on the nature and treatment of disease and lameness in horses: embracing the most approved methods, according to an enlightened system of Veterinary therapeutics for the preservation and restoration of health,

With Numerous Engravings,

Engraved expressly for this Book.

This elegant book, which is undoubtedly the most thorough and reliable of all the works which have yet appeared, is offered to the public with the full confidence that in meets a want long felt in this country, viz: a scientific, accurate, and reliable treatise on the structure, training, diseases and treatment of that noblest of our domestic animals,

THE HORSE.

Every man who owns a horse should own this valuable book,

PRICE $1,25.

Liberal Discount to Agents, and Booksellers in Quantities.

State and County Agricultural Societies could not have a better thing to distribute as prizes, or to circulate among their members.

Published by

JEWETT, PROCTOR & WORTHINGTON,

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Publishers also of

Cole's Diseases of Animals	50 cts.
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Louchars on Hot Houses	$1,00
The American Fowl Breeder	25 " jelm

BLOODED CATTLE FOR SALE.

I HAVE for sale superior Durham and Devon young bulls and heifers; calves to 2 years old, got by imported bulls, and nearly all out of imported cows. Catalogues, with full particulars of pedigrees, colors, ages, &c., may be had at the office of the Michigan Farmer, or of me, AMBROSE STEVENS.

Batavia, Genesee county, N. Y. jy-2t

BATTLE CREEK IRON WORKS.

MANUFACTURED and kept constantly on hand and for sale,

MERRILL'S DOUBLE MILLED SEPARATOS.

These Separators have in every instance taken the premium where they have been exhibited. They have been thoroughly tested and are not equalled. A large number of certificates might be given to this effect; a few of many will only be offered.

Mr. R. T. MERRILL

DEAR SIR:—Feeling that I am under obligations to you and to the farming community generally, I sit down to make known to you the results of the operations of the machine I purchased of Brown & Wilcox, of Battle Creek, Michigan. I can now say that your Double Milled Separator is decidedly the best I ever saw, both for durability and for doing the work fast and saving the grain. I have threshed and cleaned fit for market, three hundred and fifty bushels of wheat in less than *five hours*, and have threshed and fitted for market one hundred and twenty bushels in one hour, and can thresh and fit for market from five to seven hundred bushels per day with eight horses and not worry them. I have threshed for several years, and never have found a Separator that would do it up as fast as it could be threshed, without wasting the grain, until I procured this one from Brown & Wilcox last summer.

Yours truly,
Kalamazoo, Jan. 18th 1853. S. P. CADY.

To whom it may Concern.

We do hereby certify that we purchased of Wm. Brown, Battle Creek, Michigan, in July 1853, one of R. T. Merrill's Double Milled Separators, and have used the same through the season of threshing, and we do say without any fear of successful contradiction, that it cannot be equalled in this country for doing the work fast and perfect and not waste the grain. We have used the Pitts, and the Rochester, and the Fowlerville machines, and have followed threshing for eight or ten years, having used six or eight sorts of machines. We have in no instance seen or had a machine that could be compared to the Double Milled one above referred to, not only for doing the work fast and well, but also for durabililiy and ease for the team.

STEPHEN HERRINGTON,
MORRIS HERRINGTON,
Jackson, Nov. 15, 1853. C. R. HERRINGTON,

To whom it may Concern.

We are willing to certify that the machine we purchased of Wm. Brown, of Battle Creek, Mich., this season is one of R. T. Merrill's Double Milled Separators, patented April 8, 1851, and is the most perfect machine for durability, doing the work fast and perfect, and not wasting the grain that we ever have seen. We have used the Pitts and other patents and they are not to be compared to the Double Milled Separator. We can fit for market and not waste the grain, one bushel per minute: and thresh and fit for market from 1800 to 2500 bushels per week; and have used the machine for six weeks and have expended only one shilling for repairs in that time, and that for one tooth.

GILBERT RHOADS,
Liberty, Sept. 3, 1853. LEWIS RHOADS,

HORSE POWERS

of the most approved patterns, and a great variety of Agricultural Implements, such as Starbuck Plows, Nos. 4, 5, 20 and 21. A Smith's Jointer Plow, Curtiss' Iron Beam Plow, Nos. 4 and 12.

Breaking up Plows, Nos. 4, 5, 6 and 7, Corn Shellers, Mill Casting, Sleigh Shoes, Stoves in variety, and Irons, Wagon boxes, and

Muley Iron for Saw Mills,

all of which will be sold at the lowest possible rate for cash, or exchanged for Pine or Whitewood Lumber, and Shingles and Produce.

WM. BROWN,
Battle Creek, Dec. 23d, 1853. 1antf BY R. T. MERRILL, Agent.

IT NEVER FAILS.

NEWTON'S

FEVER AND AGUE REMEDY.

A Safe, Pleasant, and never-failing Remedy.

Fever and Ague,

Bilious Fever, Chill Fever, Intermitting or Remitting Fever, Bilious Headaches, Indigestion, and all other forms of disease arising from the causes which generally produce Fever and Ague.

THE co-partnership of Travers and Newton having been dissolved Travers & Newton's Fever and Ague Mixture and Pills, will hereafter be put out by me in my own name with the addition of a powder which is to be dissolved in water and taken when the fever is on. This perfects the medicine, and renders it at once safe, efficient, and reliable.

The materials of which this medicine is composed are all selected with care, and are known to be of the best quality, and perfectly pure and the manufacture is carried on under my own immediate supervision.

The directions hereafter will be printed in pamphlet form, more full, and a pamphlet will be wrapped around each bottle inside of the label.

As an exterminator of the bane of all western climates, the *Fever and Ague*, this medicine has proved superior to any as yet offered to the public.

Testimony

without measure might be adduced in its favor, but it is deemed unnecessary. A trial is what is desired.

Price reduced to $1 per bottle.

For sale in Detroit by T. & J. Hinchman, and in the country by druggists generally.

R. C. NEWTON.
declyfrm Port Huron, St. Clair Co., Mich.

Goods For Men's Wear—Clothing!

MEN'S FURNISHING GOODS,

CLOTH GOODS,

AND

GOODS FOR MEN'S WEAR IN GENERAL.

EAGLE & ELLIOTT, 61 Woodward Avenue, Detroit,

Manufacturers of Clothing,

IMPORTERS AND DEALERS in Men's Furnishing Goods, importers of French, English and German Cloths, Doe-skins, Satins, Tailor's Trimmings.

ALWAYS ON HAND,

The best manufactures of American Cloths, Satinets, Sheep's Greys, Cotton Fabrics, and goods designed for Men's Wear, by the piece, or in quantities to suit, at low prices for cash.

EAGLE & ELLIOTT,
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HOLMES & COMPANY,

IMPORTERS, JOBBERS AND RETAILERS IN

STAPLE AND FANCY DRY GOODS

And Manufacturers and Dealers in

Clothing, Millinery, Visites, and Mantillas,

No. 100 and 102 Woodward Avenue.

DETROIT ..... MICHIGAN.
March, 1854. 1y

BOOKS AND STATIONERY.

RICHMOND & BACKUS would call the attention of their friends and the public to their large and well selected stock of

BOOKS AND STATIONERY

which has been selected with great care both as to quality and price, which we now offer at as low rates as can be sold in this market.

Our stock of paper is very large, enabling us to furnish Counties and banks, Merchants and Shippers, Lawyers and Doctors, Mechanics and Farmers, with every style of Paper and Blank Books required to conduct their respective business.

We have increased our material and facilities for binding music, Periodicals, Miscellaneous and Old Books. All work done promptly and with neatness surpassed by none. RICHMOND & BACKUS.
jan1853-1y Desnoyer' block, cor. Jeff. Ave. and Bates-st.

AYER'S CATHARTIC

PILLS!

PILLS THAT ARE PILLS!!

Prof. Bayes, State Chemist of Massachusetts, says they are the last of all PILLS, and the annexed are the men who certify that Dr. Ayer's Pills are:

Lemuel Shaw, Chief Justice Supreme Court of Mass.
Emory Washburn, Gov. of Mass.
W. C. Plunkett, Lieut. Gov. of Mass.
Edward Everett, Ex-Sec. of State, and Senator of U. S.
Robert C. Winthrop, Ex-Speaker House of Rep. U. S. A.
Abbott Lawrence Minister Plenipot. to Great Britain.
† John H. Fitzpatrick, Catholic Bishop of Boston.

MEN THAT ARE MEN!!!

Among the diseases this Pill has cured with astonishing rapidity we may mention

Costiveness, Bilious Complaints, Rheumatism, Dropsy, Heartburn, Headache, arising from a foul stomach, Nausea, Indigestion, Morbid inaction of the Bowels, and Pain arising therefrom, Flatulency, Loss of Appetite, All Ulcerous and Cutaneous Diseases, which require an external Medicine, Scrofula, or King's Evil. They also by purifying the blood and stimulating the system, cure many complaints which it would not be supposed they could reach: such as Deafness, Partial Blindness, Neuralgia and Nervous Irritability, Derangements of the Liver and Kidneys, Gout, and other kindred complaints, arising from a low state of the body, or obstruction of its functions. They are the best Purgative medicine ever discovered, and you will but need to use them once to know it.

Prepared by J. C. AYER, Lowell, Mass., and sold by every Druggist and dealer in Medicine throughout the State.

June 1854. 3m

STRAY COLT.

STRAYED from the subscriber in April last, a light bay mare colt, two years old—a few white hairs in the forehead, nearest the left eye; square trotter,—a liberal reward will be given for her return, or information where she may be found. JOHN SPENCE.

Bellville, Wayne county, Mich., July 1, 1854. [jy1-tf

KALAMAZOO ADVERTISEMENTS.

COSMOPOLITAN HOTEL.

KALAMAZOO, MICH.

THE NO. ONE STAGE HOUSE,

BY CLAPP & REESE.

Board $1.00 Per Day.

Stages Leave this House every Morning for Grand Rapids and the South.

Passengers carried to and from Cars Free of Charge

jy1f

POTTER & GALE,

Wholesale and Retail

—DEALERS IN—

Heavy and Light Hardware, Agricultural and Horticultural Implements.

Agents for

Ketchum's Mowing Machine,
Manny's Mowing and Reaping Machine,
Seymour and Morgan's Self-Raking Machine.
Fairbanks' Platform and other Scales.
J. M. B. Davidson's Fire King afes.

jy6m

KALAMAZOO, - - - - - - - - MICHIGAN.

BEALE & ADAMS.

COMMISSION MERCHANTS,

—FOR THE SALE OF—

W O O L ,

NO. 166 AND 79 1-2 PINE STREETS,

New York.

GEO. W. BEALE, for 6 years with Blanchard & Co., Kinderhook.
SETH ADAMS, from Providence, R. I.

REFERENCES.

HALL, DANA & CO., New-York, R. CHAPIN & SON, Providence.
G. S. ROBBINS & SON, " EDW. SEAGRAVE, "
JOHN FARNUM & CO., Phila., MURDOCK & DALL, Baltimore,
H. BLANCHARD & CO., Kinderhook. jy2m*

EAGLE FOUNDRY.

W. A. BURT, & SON,

—MANUFACTURERS OF—

STEAM ENGINES,

Mill Machinery, Iron and Brass Castings, Screws of all kinds and sizes, and Repairing done generally.

KALAMAZOO, MICH. jy6m

CARDER & RYDER,

Manufacturers and Dealers

In all kinds of

CABINET FURNITURE,

Chairs, Matrasses, &c.

OUR assortment may always be found complete, and of superior style and finish. Orders respectfully solicited and promptly attended to. Warerooms near the Cosmopolitan Hotel,

KALAMAZOO, MICH. jy3m

WHITE & WILCOX,

(Successors to D. A. McNair.)

CHEMISTS & DRUGGISTS,

KALAMAZOO, MICH.

WHOLESALE AND RETAIL DEALERS IN

Pure Medicines, Paints, Oils, and Dye Stuffs,

ALSO WHOLESALE AGENT FOR THE

MAGIC DRY SOAP.

DR. SPRING'S LUNG ELIXIR,

And all the Popular Medicines of the day.

jy3m

J. B. CORNELL,

—MANUFACTURER OF—

CARRIAGES AND BUGGIES.

ALL orders promptly attended to, and all work warranted, for we use none but the best of materials. Shop near Arms & Co.'s Machine Shop, corner of Rose and Eleanor streets,

Kalamazoo, Mich. jy1y

MARSHALL ADVERTISEMENTS.

J. HOLLON & SON.

—DEALERS IN—

Agricultural Implements, Iron, Steel, Nails, Glass, and Shelf Hardware.

All of which are offered on the most Favorable Terms.

MARSHALL, MICH. jy3m

WM. HAMMOND,

DEALER in all kinds of Agricultural Implements, Field and Garden Seeds, &c.
Marshall, Calhoun Co., Mich. jely

SHEPHERD'S DOGS, SUFFOLK PIGS,

AND

LARGE POULTRY!

THE undersigned, who resides within half a mile of the village of Marengo, Calhoun county, offers for sale

Six Young Shepherd's Dogs.

A Number of Young Suffolk Pigs.

Bramah Pootra, Shanghai and Cochin China Fowls,

All of which he will warrant to be bred from as good blood as there is in the country. G. W. DRYER,

[aug-2t] Marengo, Calhoun Co., Mich.

C. B. HUTCHINSON'S

STAVE MACHINE!

THIS Machine was awarded the highest reward—a Silver Medal, at the Crystal Palace.

The subscriber is the authorised agent of the Patentee, and offers for sale individual, town and county rights in the unsold territory of the State of Michigan. All letters post-paid will receive prompt attention.

A machine may be seen in operation at Rawsonville, 4½ miles southeast of Ypsilanti. F. E. JONES.

Ann Arbor, July 4, 1854. jy-tf

DAVIS & WATTS,

DEALERS IN

Clocks, Watches, Jewelry, Silver, Plated Brittania and German Silver Ware, Musical Instruments, Pocket and Table Cutlery,

and a general assortment of VIOLIN, BASS VIOL and GUITAR STRINGS, and fancy goods.

We pledge ourselves that our stock shall compare with any west of New York, both as to quality, quantity and prices.

All kinds of fine clocks, watches and jewelry repaired and warranted for one year.

No. 2, Phœnix Block, Ann Arbor. [aug-6m]

A Valuable Farm for Sale.

THE owner wishes to sell his farm in the town of Livonia Wayne county, sixteen miles northwest from Detroit, half a mile from the plank road, and three miles from the village of Farmington consisting of 155 acres, of which 119 are improved, the remainder in good timber. There is an orchard of 40 bearing apple trees, of choice grafted fruit, together with other fruit; a good barn, sheds, wagon house, shop, and comfortable frame dwelling house, two good wells and a cistern. Said farm is well watered and well fenced, is of good productive soil and easy to work. For further particulars consult the owner on the premises. L. NASH.

Livonia, March 7th, 1854. mart

HICKOCK'S CIDER MILLS

FOR HAND OR HORSE POWER—Price $4.

THESE mills have been improved. 1st. The mill has been increased in size, so that we can put under a tub that holds nearly three bushels of apples after they are ground.

2d. Instead of a solid bottom board, or one covered with cloth, to go under the tub, it has a bottom board grooved in a peculiar manner, and both it and the tub after repeated and severe trials, have been found the best for the purpose—as they will always let the cider out clear and free from pomace.

3d. The bottom, or floor, is constructed entirely different from the former ones; and the pomace box has been much increased in size, by passing behind and below the floor

4th. The castings have been made much heavier, (about one-fifth) and the shafts run in iron boxes bolted together.

5th. Heretofore great trouble has occurred in getting cylinders that would not swell and get out of place. That difficulty has now been overcome, by making them with heavy oak or ash staves, on iron heads, the whole keyed together, and the staves *locked* in by the iron heads, so that it is next to an impossibility for them to get out of place.

The mill will make from 6 to 12 barrels per day, and has made 4 barrels in an hour.

They can be used anywhere, and can be moved by two men.

Send your orders early. D. O. & W. S. PENFIELD,

[aug-4t] Detroit.